



May 15, 2013

Regional Administrator
U.S. EPA Region V
Mail Code SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3507
Attn: Michelle Kerr

Director, Remediation
Site Remediation Section
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155
Attn: Nile Fellows

Subject: United States of America, et al., vs. Reilly Tar and Chemical Corporation, et al., File No. Civ. 4-80-469. CD-RAP Section 3.4. 2012 Annual Monitoring Report

Dear Michelle and Nile,

The City of St. Louis Park hereby submits the 2012 annual monitoring report for the Reilly Site. The report contains groundwater monitoring data collected in 2012 and provides further information to respond to your comments expressed in your letter dated January 18, 2013. The following paragraphs outline the questions and clarifications we intended to discuss had you been available to meet. We also indicate below how we addressed your comments in the attached report.

The Agencies' January 18, 2013 letter contains an introductory description of the Agencies' opinion that the City's performance was inadequate because the Agencies disagreed with the conclusions of the 2011 annual monitoring report. In particular, the Agencies "have not agreed with the City's assertion that the pumping wells are adequately containing contamination emanating from the site or that the monitoring network for the site is sufficient..." The City sought clarification of the Agencies position regarding the pumping well assessment because your May 22, 2012 letter indicated disagreement with the conclusion that the wells operating in shallow, non-drinking water aquifers did not hydraulically contain all of the PAH found in St. Louis Park groundwater. The City would point out that each well's effectiveness can have more than one measure, and that the effectiveness varies by aquifer. The City would like clarification on which wells and which aquifers the agencies are referring to. In the 25 years since the effective date of the CD-RAP, the potential for insufficient gradient control has only been raised by the Agencies for the Prairie du Chien - Jordan Aquifer (PCJ) as a response to the loss of pumping at well W48. In examining this potential problem the City has not relied on the theoretical calculations and modeling of hydrologic performance or an analysis of water levels to determine that capture in the PCJ is sufficient. Instead, the City is reassured by the water quality results that indicate

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the size of the area that contains PAH in excess of the CD-RAP drinking water criteria is shrinking, and none of the down gradient well locations (including well W403) contain Reilly Site related PAH above the criteria. The Reilly Site groundwater data do not indicate the presence of an uncontrolled source of PAH that would be drawn in by downgradient pumping wells at concentrations of concern to human health or the environment.

The City is also puzzled by the Agencies' comment regarding the monitoring network. The 2011 annual monitoring report did not contain explicit statements about the adequacy of the monitoring well network, although a couple of references were made to limitations of the existing network. At the time the CD-RAP was negotiated, there were scores of monitoring wells in St. Louis Park installed by Minnesota agencies and their consultants and other existing private and municipal wells that were used for groundwater monitoring. At the time, an evaluation of the monitoring network determined that the CD-RAP should require the installation of three Drift wells, three Platteville wells, five St. Peter wells and three Prairie du Chien – Jordan wells. Over the course of the project the City has installed many additional wells primarily to provide data to assess the effectiveness of Drift and Platteville Aquifer source and gradient control wells and the Northern Area pursuant to CD-RAP Sections 9.3, 9.4, and 9.5. The City has recently offered to install additional monitoring wells to assess cessation of pumping. The City is pragmatically utilizing existing wells to the extent possible and in accordance with the requirements of the CD-RAP. It may be said that no monitoring well network is perfect, and that one could always use more data. However, the monitoring well network has provided the data needed to make decisions about the Reilly Site and has been augmented where necessary. Thus the City would like the Agencies to clarify their comment on this point.

The approach taken in the 2012 annual monitoring report is to assess the pumping wells using water levels, flow rates, water quality, and hydrologic calculations using a linear-log kriging method that conforms to Agency guidance. The City believes that the data provide compelling evidence that Reilly Site PAH are not migrating problematically and that natural attenuation controls that migration to a greater extent than pumping in the Drift, Platteville, and St. Peter Aquifers.

The Agencies January 18, 2013 letter contained three suggestions for improving the annual report:

1. The use of statistical tests to evaluate concentration trends (using the entire period of record);
2. Conducting field work to determine site-specific values for hydraulic conductivity and gradient, and following EPA guidance documents; and,
3. Defining the plume where it exceeds criteria.

Suggestion 1

The Agencies letter was not clear with respect to statistical tests because the City wanted to know if specific tests were being requested, or if the Agencies had a preference for how this work should be done or what tools the individuals working on this project may

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be familiar with or have had some success with on other projects. Given that the 2011 annual monitoring report was unsuccessfully revised to comply with the Agencies request that graphs be used to define trends, the City was hoping to get pre-approval of a statistical test that would be acceptable. Also, the Agencies direction to use the entire period of record was confusing based on the example cited for well SLP4 where the Agencies indicate a “notable and steady increase from 2007/8 to present.” The City would point out that using the entire period of record might not be valid where the analytical procedures have changed resulting in different detection limits and numbers of parameters.

The City addressed this suggestion in the 2012 annual monitoring report by using EPA’s ProUCL 4.1 software to evaluate trends for the three PAH sums that are referenced in CD-RAP Section 2.2 as drinking water criteria. ProUCL’s full precision option was employed, which is useful when dealing with data sets consisting of small numerical values, resulting in small values of the various estimates and test statistics. Trends were determined using the Mann-Kendall trend test, Theil-Sen trend line, and linear regression methods. The results are presented in Table 3 and the calculations and graphs are included as Appendix A. Trends were calculated for all wells sampled in 2012 using the entire period of record as directed by the Agencies.

Suggestion 2

The Agencies’ letter was not clear with respect to the collection of site specific data because the calculation of the capture zone was done using site specific data where possible, and using literature values that are appropriate. Many iterations of capture zone calculations were performed by the City and the one example for each aquifer included in the report was judged to be representative and realistic for this project. Also unclear was the comment that “multiple lines of evidence” were not used, because the report contained discussions of water quality and water levels in addition to the hydrologic calculations. The purpose of reciting items ‘a’ through ‘e’ on page 3 of the letter was unclear because none of the issues raised factored in to the discussion of the pumping well effectiveness, nor do they appear in the “Action” suggested by the Agencies.

Hydraulic Conductivity

The revised 2011 annual report performed calculations that used literature values for hydraulic conductivity for the St. Peter and Prairie du Chien – Jordan Aquifers and values from aquifer tests at wells W420 and W421 for Drift and Platteville Aquifers, respectively. The calculated capture areas in the St. Peter and Prairie du Chien – Jordan Aquifers cover large areas, thus it is not necessarily deficient to use an average aquifer parameter from the literature that may represent a large area of the aquifer as opposed to a value that is only attributed to a pumping test at one well. In fact, aquifer tests were performed at wells W439 and W410 and values for the site specific aquifer testing are listed below:

W410: $k = 29$ feet per day
W420: $k = 223$ feet per day

W421: $k = 187$ feet per day
W439: $k = 214$ feet per day

No formal aquifer tests have been performed on Prairie du Chien – Jordan Aquifer wells in St. Louis Park to our knowledge. No such test was specified in the CD-RAP for well W23 when it was reconstructed as a source control well. Also, the CD-RAP did not specify the area to be controlled by well W23; rather, its performance is only tied to a cessation criterion of 10 micrograms per kilogram of TPAH. The City has used the time extension for this report to alter pumping rates in some of its municipal wells in an attempt to produce drawdown that can be directly attributed to pumping at a specific well. The analysis of the St. Louis Park and Edina SCADA data has enabled a preliminary determination of hydraulic conductivity of 42 feet per day using data from wells SLP4 and SLP10. Future SCADA data analyses will likely provide more information on Prairie du Chien – Jordan Aquifer parameters.

The 2012 annual report uses linear log kriging of water level data rather than site specific hydraulic conductivity data from pumping tests at each well to model the potentiometric surface of each aquifer and graphically determine a hypothetical capture area for the Reilly Site pumping wells SLP4, SLP10, W410, W420, W421, and W439. This list does not correspond directly to the list on page 4 of the Agencies' letter because pumping at well W23 does not cause water level changes in any other well. Well W409 was mistakenly included by the Agencies as a pumping well.

Hydraulic Gradient

The hydraulic gradient in the Drift and Platteville Aquifers is easily measured in the vicinity of the Reilly Site because there are plenty of wells that are not influenced by groundwater pumping. That site specific gradient data were used in the 2011 annual report capture area calculations. However, the extensive drawdown created by pumping well W410, and the fewer numbers of monitoring points in the St. Peter Aquifer, makes it more difficult to measure a site specific yet natural gradient. The use of literature values for the gradient is realistic for the St. Peter Aquifer because the aquifer was extensively studied in St. Louis Park before pumping began (e.g., Lorenz, D.L. and Stark, J.R., 1990. Simulation of Groundwater Flow in the St. Peter Aquifer in an Area Contaminated by Coal-Tar Derivatives, St. Louis Park, Minnesota. Water Resources Investigation Report 90-4150)

Literature values for the gradient in the Prairie du Chien – Jordan Aquifer do not represent the actual irregular potentiometric surface of the aquifer that exists due to the extensive pumping. The City agrees with the Agencies that a capture area calculation for the Prairie du Chien – Jordan Aquifer would require many simplifying assumptions that are not well aligned with actual conditions at the pumping wells. The entire study area including St. Louis Park, Hopkins, and Edina has long been known for permanent water levels declines, well interference, and a composite cone of depression within which the regional gradient is absent (Norvitch, R.F., Ross, T. G., and Brietkrietz, A., 1973. Water Resources Outlook for the Minneapolis-Saint Paul Metropolitan Area, Minnesota. USGS Open-File Report: 73-203). Water that enters the study area is extracted by one of the pumping wells. As stated above, the 2012 annual monitoring report does not rely on a

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calculation using the horizontal hydraulic gradient, rather uses kriging algorithms to generate potentiometric surface maps that can be evaluated for flow patterns.

Suggestion 3

The Agencies' letter is unclear in that none of the wells mentioned by the Agencies (i.e., wells W48, E13, and SLP 6) exceeded CD-RAP drinking water criteria and none were shown in Figure 2 of the 2011 report within the Prairie du Chien – Jordan Aquifer plume. The Agencies' comment about these wells is in the form of a question, which may be best answered in a conversation. The 2012 annual monitoring report presents PAH concentration maps using computer interpolated contour lines and no inferences about historic PAH concentrations in wells that are no longer sampled. Isoconcentration lines that match the CD-RAP drinking water criteria are shown on the figures. No manual manipulation of the interpolated contours was done to produce the figures in the 2012 report.

Finally, the Agencies' letter provided two specific comments regarding plume spreading and well W403. No action item or suggestion was provided by the Agencies regarding plume spreading and the City is happy to let the data "speak for themselves". The 2012 annual monitoring report provides the City's updated evaluation of Prairie du Chien – Jordan Aquifer data. The Platteville and St. Peter Aquifer wells cited by the Agencies are not in new areas or adjacent communities and the City does not agree that the data at wells W410 and W432 are proof that the plumes is spreading contrary to the remedial design. The Agencies can halt the spread of PAH in the St. Peter Aquifer by approving the City's request to cease pumping at well W410.

The City agrees that detecting PAH above background in Edina and/or Hopkins wells could indicate lack of containment, but only if there is an assumption that the PAH were within the containment volume perimeter at the outset of pumping (U.S. EPA, 1994. Methods for Monitoring Pump-and-Treat Performance. EPA 600/R-94/123. June 1994. Page 27). In St. Louis Park, well closures beginning in 1978 spread PAH over a large area of the Prairie du Chien – Jordan Aquifer; including westward into Hopkins. A portion of that 1978 to 1982 plume eventually migrated into pumping wells in Edina and Hopkins at concentrations below CD-RAP drinking water criteria. The groundwater modeling done in the early 1980s to support CD-RAP negotiations determined that the existing network of municipal pumping wells was sufficient to control the plume, thus the CD-RAP did not require the installation of new pumping wells in the Prairie du Chien – Jordan Aquifer.

Continued groundwater monitoring will determine if the CD-RAP drinking water criteria are exceeded in the adjacent communities, and if that happens the CD-RAP calls for carbon treatment. Based on the distribution of PAH in 2012 and the historical trends in the data at key wells, it seems unlikely that will happen because the flow paths to adjacent community wells are from areas that contain PAH concentrations in the range of 100 to 200 parts per trillion (i.e., below the 280 ng/L criterion for OPAH and little or no carcinogens). The specific water quality data that provides this evidence includes:

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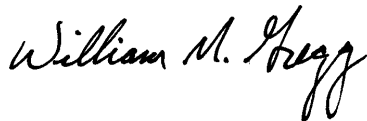
- The plume that exceeds the CD-RAP drinking water criteria extends from well W23 to well SLP10. This was the area of the “original” plume before well closures beginning in 1978.
- Water quality at well W29 indicates that the PAH concentrations exceeded the CD-RAP drinking water criteria prior to 1998 and have been below those criteria since.
- Water quality at well W48 indicates that the PAH concentrations exceeded the CD-RAP drinking water criteria prior to 1997 and have been below those criteria since.

Wells W29 and W48 are located between the “original” plume area around wells W23 and SLP10 and wells E13 and H6. Their water quality data demonstrate that the flow path west of the Reilly Site (potentially contributing water to wells H6 and/or E13) contains PAH concentrations that meet criteria. Given the dilution that occurs due to the radial flow of groundwater to the municipal supply wells, it would take high concentrations of PAH migrating from the Reilly Site to cause an exceedance in the Edina or Hopkins wells. The only area where high concentrations of PAH exist in the Prairie du Chien – Jordan Aquifer is near well W23 where the groundwater flow path is towards well SLP10.

The City understands that the Agencies do not agree with the conclusion that foreign materials in well W403 are responsible for the elevated PAH concentrations in samples from that well. However, the City disagrees with the statement that the Agencies have refuted this explanation on several occasions. The Agencies may have disagreed more than once, but they have not proven that the City’s conclusion is wrong. The City has agreed to sample the well quarterly in 2013, and even though the first sample was delayed, four samples will be collected this year. Hopefully that data will render further re-hashing of this disagreement moot. The 2012 annual monitoring report provides information on the scope and findings of the City’s investigation of the foreign materials in well W403 (Appendix B).

We look forward to your review of the 2012 annual monitoring report and continuing our discussions about the Reilly Site with you in the near future.

Sincerely,
Summit Envirosolutions, Inc.



William M. Gregg
Project Leader for the City of St. Louis Park

cc. Scott Anderson (City of St. Louis Park)
Mike Rardin (City of St. Louis Park)
John Jones (Vertellus)

**ANNUAL MONITORING REPORT
FOR 2012**

SUBMITTED TO THE

**REGIONAL ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V**

**EXECUTIVE DIRECTOR
MINNESOTA POLLUTION CONTROL AGENCY**

BY

THE CITY OF ST. LOUIS PARK, MINNESOTA

**PURSUANT TO
CONSENT DECREE - REMEDIAL ACTION PLAN
SECTION 3.4**

UNITED STATES OF AMERICA, ET AL.

vs.

REILLY TAR & CHEMICAL CORPORATION, ET AL.

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA
CIVIL NO. 4-80-469**

May 15, 2013

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1.0 INTRODUCTION

Pursuant to Section 3.4 of the Consent Decree - Remedial Action Plan (CD-RAP) in the case of the United States of America, *et al.* vs. Reilly Tar & Chemical Corporation, *et al.*, this report presents the results of all chemical analyses and water level measurements for calendar year 2012 that are not presented in previous reports.

The ground water monitoring conducted in 2012 was performed in accordance with the methods and procedures identified in the 2012 Sampling Plan. The City of St. Louis Park (City) has overall responsibility for conducting the ground water monitoring required by the CD-RAP. In accordance with the 2012 Sampling Plan, Summit Envirosolutions, Inc. (Summit) collected ground water samples from monitoring wells. TestAmerica Laboratories, Inc. (TA) and Pace Analytical Services (Pace) performed the analyses for PAH.

The 2012 monitoring data are presented separately for each aquifer, starting with the Mt. Simon-Hinckley Aquifer, which is the deepest aquifer below the ground surface, and ending with the Drift Aquifer, which is the uppermost aquifer monitored. A series of maps has been prepared to support the aquifer by aquifer review and presentation of the 2012 monitoring data, pursuant to Section 3.4 of the CD-RAP.

Groundwater monitoring has been conducted in each of the 25 years between 1988 and 2012 inclusive, in accordance with the CD-RAP for the former Reilly Tar & Chemical Corporation site (Reilly Site or Site). The historical analytical results offer the opportunity to compare the 2012 monitoring data and assess changes in the PAH concentrations over time. A series of tables has been prepared for each aquifer to help present the analytical results since 1988. These tables illustrate trends in PAH concentrations in the ground water for each monitoring well. Appendix A contains a statistical analysis of the monitoring data to identify trends in each well. A further depiction of the PAH concentrations over time in municipal drinking water supply wells is presented graphically in Appendix C.

The CD-RAP relied on pump and treat technology to control PAH concentrations in groundwater in each aquifer containing PAH contamination due to Reilly's activities at the Site. New wells were drilled in the Drift, Platteville, and St. Peter Aquifers for that purpose and the municipal drinking water supply wells in the Prairie du Chien – Jordan Aquifer are pumped at specified minimum rates in accordance with the CD-RAP. Each aquifer by aquifer data review includes a discussion of the effectiveness of the pumping wells in meeting the objectives of the CD-RAP.

A laboratory data review was conducted to assess the quality of the laboratory data. The data quality assessment (DQA) can be found in Section 9.0 of this report. Additionally, all of the 2012

Test America data and 10% of the Pace data underwent full data validation. The enclosed disk contains laboratory data packages for each set of samples collected and submitted for analysis at the same time. Attached to the end of the data packages are validation reports summarizing the quality of the analytical data contained in each package. The data are organized chronologically throughout the year for each laboratory.

1.1 Response to Agency Comments

This report attempts to incorporate comments the Agencies have made to past annual monitoring reports. For example, the laboratory data are provided on an enclosed disk rather than reproduced in Appendixes. The Agencies provided specific comments on January 18, 2013 that are addressed in this report. The Agencies January 18, 2013 letter contained three suggestions for improving the annual report:

1. The use of statistical tests to evaluate concentration trends (using the entire period of record);
2. Conducting field work to determine site-specific values for hydraulic conductivity and gradient, and following EPA guidance documents; and,
3. Defining the plume where it exceeds criteria.

The 2012 annual monitoring report used EPA's ProUCL 4.1 software to evaluate trends for the three PAH sums that are referenced in CD-RAP Section 2.2 as drinking water criteria. ProUCL's full precision option was employed, which is useful when dealing with data sets consisting of small numerical values, resulting in small values of the various estimates and test statistics. Trends were determined using the Mann-Kendall trend test, Theil-Sen trend line, and linear regression methods. The results are presented in Table 3 and the calculations and graphs are included as Appendix A. Trends were calculated for all wells sampled in 2012 using the entire period of record as directed by the Agencies.

The 2012 annual report uses a new approach for evaluating the capture areas of pumping wells by using linear log kriging of water level data rather than calculations using site specific hydraulic conductivity and gradient data at each well. Linear log kriging models the potentiometric surface of each aquifer and graphically determines a hypothetical capture area for the Reilly Site pumping wells. The only new field work done to support this work was the continued collection of water level and pumping data for all the St. Louis Park and Edina municipal wells via automatic data recording systems.

The 2012 annual monitoring report presents PAH concentration maps using computer interpolated contour lines and no inferences about historic PAH concentrations in wells that are no longer sampled. Isoconcentration lines that match the CD-RAP drinking water criteria are shown on the figures. No manual manipulation of the interpolated contours was done to produce the figures in the 2012 report.

2.0 MT. SIMON-HINCKLEY AQUIFER

St. Louis Park municipal water supply wells SLP11, SLP12, and SLP13 were sampled once in 2012. Well SLP 17 has not been used since 2000 and was not available for sampling due to damaged pump and controls. Neither the City nor the Minnesota Department of Health (MDH) issued permits for any new Mt. Simon-Hinckley Aquifer wells within the boundaries of the City of St. Louis Park (encompassing greater than a one mile radius around well W23 as specified in Section 5.3.2 of the CD-RAP) in 2012. The 2012 analytical data for the Mt. Simon-Hinckley wells are shown on **Figure 1**.

The advisory levels for the sum of benzo(a)pyrene and dibenz(a,h)anthracene, carcinogenic PAH, and Other PAH are 3, 15 and 175 nanograms/liter (ng/l or parts per trillion), respectively. **Table 1** lists the historical results since 1988 of other PAH and carcinogenic PAH data collected from the three wells that are still in service. The 2012 data indicate that the sums of the concentrations of benzo(a)pyrene and dibenz(a,h)anthracene, carcinogenic PAH, and other PAH in wells SLP11, SLP12, and SLP13 were below the advisory levels for these compounds. **Table 2** provides a summary of the statistical trend data shown in **Appendix A**. A downward trend was calculated for the sum of Other PAH in the Mt. Simon-Hinckley Aquifer municipal wells, and the water quality remains below the CD-RAP drinking water criteria.

Remedial actions for the Mt. Simon-Hinckley Aquifer included the re-construction of wells W23 and W105 in 1987 to eliminate those pathways for PAH to migrate from shallower aquifers. Pumping in the Mt. Simon-Hinckley Aquifer is solely for the purpose of water supply. Thus, monitoring the quality of the water in 2012 provided ongoing assurance that no further remedial actions were needed.

3.0 IRONTON-GALESVILLE (WONEWOC) AQUIFER

Analytical results from ground water samples collected during 1988 through 1991 from well W105 had consistently met the criterion (less than 10 parts per billion [ppb] total PAH) for discontinuing the 25 gallons per minute (gpm) pumping rate. Therefore, in accordance with CD-RAP Section 6.1.5, the pump in well W105 was inactivated on December 23, 1991, and remains inactivate. The CD-RAP specified the 25 gpm pumping rate at well W105 to mitigate the potential source this well may have been to the Ironton-Galesville Aquifer. When pumping, well W105 likely exerted hydraulic control over a relatively small area in the vicinity of the well.

The well W105 pump remains installed in the well and samples are collected from a valve in the discharge pipe within the well house. On two prior occasions, well W105 was sampled after purging the well for approximately 30 minutes (the pumping rate is approximately 25 gpm). Those two samples (collected in 2008 and 2010) contained total PAH concentrations greater than 10 ppb causing the City to resample the well. Resampling was performed after purging the well overnight and in each case the analytical results showed total PAH concentrations below 10 ppb and more in line with historical results. Based on this experience, samples from well W105 are collected after purging for 12 to 24 hours. Other pumping wells on or near the Reilly Site (i.e., W420, W421, W439, W23, and W410) will likely require similar long-term purging to enable the collection of representative groundwater samples using the existing pumps and discharge piping.

Neither the City nor the MDH issued permits for any new Ironton-Galesville Aquifer wells within the boundaries of the City of St. Louis Park (encompassing greater than a one mile radius around well W23 as specified in Section 6.2.1 of the CD-RAP) in 2012. Therefore, in accordance with the CD-RAP and the sampling plan, the only monitoring in this aquifer involved well W105. Well W105 was sampled on September 19, 2012 with split samples going to both Test America's laboratory in Arvada, Colorado and Alpha's laboratory in Mansfield, Massachusetts. The Alpha laboratory testing was an extra effort by the City to provide a check on the water quality and explore options for alternate laboratory facilities. Alpha's laboratory testing is not part of the current Quality Assurance Project Plan approved by the Agencies. The Alpha results are provided for informational purposes. The 2012 data are provided on the enclosed disk.

The historical analytical results for well W105 from 1988 through 2012 are summarized on **Table 2** and the three CD-RAP drinking water criteria PAH sums were subjected to the statistical analysis presented in **Appendix A. Table 3** provides a summary of the statistical trend data shown in **Appendix A**. An upward trend was calculated for carcinogenic PAH in well W105. The overall water quality remains below the cessation criteria. Thus, remedial action goals are being met in this aquifer at the Site.

4.0 PRAIRIE DU CHIEN-JORDAN AQUIFER

Prairie du Chien-Jordan Aquifer wells were monitored in accordance with the 2011 Sampling Plan. However, three samples were not collected in 2012, as described below:

- SLP6 was due to be sampled quarterly in 2012. It was unavailable for sampling in the first quarter due to maintenance, but was sampled in the last three quarters of the year.
- SLP7 (and SLP9) are unused wells with no pumps installed. They are welded shut in accordance with the City's wellhead protection plan and were not available for sampling.
- W119 was due to be sampled quarterly in 2012 but was only available for sampling in the second, third, and fourth quarters. During the first quarter the well was winterized and golf course did not provide access.

Analytical results indicate that the only well used for drinking water supply that contains PAH in excess of the CD-RAP drinking water criteria is well SLP10, which is treated with carbon. Water quality results for the 2012 samples from well SLP4 meet the CD-RAP drinking water criteria without GAC treatment. In fact, SLP4 has met the CD-RAP drinking water criteria since 2002. However, the City continues to treat the water from both wells SLP10 and SLP4. The 2012 data are provided on the enclosed disk.

In addition to water quality monitoring, ground water elevations were recorded at most municipal Prairie du Chien-Jordan Aquifer wells that are equipped with pressure transducers. Data are available from St. Louis Park wells for all of 2012 and are available for Edina wells beginning on September 19, 2012 through the end of the year. A total of 13 wells were used to collect ground water samples during 2012. **Table 4** contains water level elevations measured at or near the time of sampling in each aquifer. The direction of ground water flow in the Prairie du Chien-Jordan Aquifer is strongly affected by pumping wells. Municipal wells in St. Louis Park and surrounding cities typically pump at 1,000 gpm or more, and have a considerable effect on localized ground water flow. According to several literature resources, including the USGS (Water Supply Paper 2211, 1984), Norvitch and others (Water Resources Outlook of the Minneapolis and St. Paul Metropolitan Area, 1973), the regional ground water flow in the Prairie du Chien-Jordan Aquifer is toward the east.

A depiction of groundwater elevation data, contours, and associated flow direction lines are shown in **Figure 2**. The groundwater capture shown in **Figure 2** was evaluated by an approach that uses water level data and a linear-log kriging algorithm developed by Papadopoulos and Associates, Inc. and described in "KT3D_H2O: A Program for Kriging Water Level Data Using Hydrologic Drift Terms" (Karanovic, et al, GROUND WATER, Vol. 47, No. 4, July-August 2009, pp. 580-586) and "Kriging Water Levels with a Regional-Linear and Point-Logarithmic Drift" (Tonkin, et al, GROUND WATER, Vol. 40, No. 2, March-April 2002, pp. 185-193). Summit used the KT3D_H2O computer code with Prairie du Chien – Jordan Aquifer water level data collected in September 2012 to

generate the potentiometric surface (groundwater elevation contours) shown in **Figure 2**. Groundwater flow lines were then added manually perpendicular to the contours to show areas where the long term pumping has generated hydraulic head gradients toward a pumping well. The following input parameters were used for the kriging:

Drift Term = 1

Model = Spherical

Nugget = 0

Variance = 1

Grid Size = 10 meters

Groundwater elevations and flow rates at wells in the Prairie du Chien-Jordan Aquifer were obtained from pressure transducer and flow rate data warehoused in the Supervisory Control and Data Acquisition (SCADA) systems maintained by the City of St. Louis Park and the City of Edina. The potentiometric surface map in **Figure 2** depicts the influence of pumping on water levels in the Prairie du Chien-Jordan Aquifer. This influence makes the determination of a regional gradient infeasible using the wells shown in **Figure 2**.

Table 5 presents a historical summary of analytical results from 1988 through 2012 for Prairie du Chien-Jordan Aquifer wells. ProUCL output for the statistical analyses of the three CD-RAP drinking water criteria sums are included in **Appendix A. Table 3** summarizes the statistical trends calculated for each well. A statistically significant trend did not exist for most of the PAH sums in most of the Prairie du Chien-Jordan Aquifer wells. Instead, the water quality could be described as consistent year to year and variable but steady. Some wells showed decreasing trends, especially for the OPAH sum. Increasing OPAH trends were indicated for wells E7, E13, and SLP6; however all three wells remained below the CD-RAP drinking water criterion of 280 nanograms per liter. Increasing CPAH trends were calculated for wells SLP10, W119, W403, and W23.

Figures 3, 4, and 5 are isoconcentration maps for the three CD-RAP drinking water criteria sums using the 2012 analytical results for Prairie du Chien – Jordan Aquifer wells. PAH concentrations in excess of the CD-RAP drinking water criteria do not appear to be migrating beyond wells that have historically exceeded the criteria. The water quality trends at well SLP4 indicate that the eastern extent of the area containing PAH above the CD-RAP drinking water criteria may be shrinking.

Further information regarding the investigation and cleanout of well W403 is provided in **Appendix B**.

5.0 ST. PETER AQUIFER

Eleven St. Peter Aquifer wells were monitored in 2012 in accordance with the 2012 Sampling Plan. This was the first year using the analytical method for priority pollutant PAH with a reporting limit of approximately 42 nanograms per liter. In addition to water quality monitoring (see enclosed disk), groundwater elevations were measured in St. Peter Aquifer wells as shown on **Table 4**. **Table 6** presents a historical summary of analytical results from 1988 through 2012 for St. Peter Aquifer wells.

A depiction of groundwater elevation data, contours, and associated flow direction lines are shown in **Figure 6**. The groundwater capture shown in **Figure 6** was evaluated using water level data and the linear-log kriging algorithm developed by Papadopoulos and Associates, Inc. Summit used the KT3D_H2O computer code with St. Peter Aquifer water level data from **Table 4** to generate the potentiometric surface shown in **Figure 6**. Flow lines were then manually added to show areas where the long term pumping has generated hydraulic head gradients toward the pumping well (W410). The following input parameters were used for the kriging:

Drift Term = 0
Model = Spherical
Nugget = 0
Variance = 1
Grid Size = 10 meters

The flow rate for well W410 averaged 58 gpm for the year, as measured and recorded by the City. The potentiometric surface map in **Figure 6** depicts the influence of pumping on water levels in the St. Peter Aquifer.

Water quality results in St. Peter Aquifer samples were assessed using statistical methods as shown in **Appendix A** and summarized in **Table 3**. In 2012 the St. Peter Aquifer samples were analyzed for priority pollutant PAH, thus the number of compounds included in the sum of OPAH was fewer. Only well W410 showed an increasing trend (for OPAH) which is understandable as it pumps at a constant rate drawing water and PAH from the vicinity of the Reilly Site into the discharge. The remaining St. Peter Aquifer wells show stable or decreasing trends.

Figures 7, 8, and 9 are isoconcentration maps for the three CD-RAP drinking water criteria sums using the 2012 analytical results for St. Peter Aquifer wells. The lack of downgradient impacts appears to indicate that PAH are not migrating beyond well W410, thus remedial goals are being met. It appears that pumping well W410 is pulling PAH from the Reilly Site to the well.

6.0 PLATTEVILLE AQUIFER

In accordance with the 2012 Sampling Plan, 18 samples were collected from 16 Platteville Aquifer monitoring wells in 2012. Due to leaks in the discharge line the first and second quarter, samples from well W421 were not collected in 2012. In addition to water quality monitoring, ground water elevations were measured in Platteville Aquifer wells on the sampling dates (**Table 4**).

Table 7 is a historical summary of analytical results since 1988 for Platteville Aquifer wells.

A depiction of groundwater elevation data, contours, and associated flow direction lines are shown in **Figure 10**. The groundwater capture shown in **Figure 10** was evaluated using water level data and the linear-log kriging algorithm developed by Papadopoulos and Associates, Inc. Summit used the KT3D_H2O computer code with Platteville Aquifer water level data from **Table 4** to generate the potentiometric surface shown in **Figure 10**. Flow lines were then manually added to show areas where the long term pumping has generated hydraulic head gradients toward a pumping well. The following input parameters were used for the kriging:

Drift Term = 0

Model = Spherical

Nugget = 0

Variance = 1

Grid Size = 10 meters

Despite being out of service for more than a quarter of the year, the flow rate for well W421 averaged 15 gpm for the year (total amount pumped divided by 365 days), as measured and recorded by the City. The potentiometric surface map in **Figure 10** depicts the influence of pumping on water levels in the Platteville Aquifer.

Water quality results in Platteville Aquifer wells were assessed using statistical methods as shown in **Appendix A** and summarized in **Table 3**. The trend calculations use the various PAH sums for the entire period of record as directed by the Agencies, however, this may bias the trend calculations for some wells because some of the Platteville Aquifer samples have been analyzed using different PAH analytical methods over time. For example, The pumping wells (W421 and W434) were analyzed by Test America for 31 PAH compounds and the laboratory data sheets indicate typical reporting limits of 10 micrograms per liter. Beginning in 2010, testing for all the Platteville Aquifer samples involved analyses by Pace Analytical Services for 16 priority pollutant PAH with typical reporting limits of 0.042 micrograms per liter. Also, prior to 2002, many Platteville Aquifer samples were analyzed for 31 PAH compounds using the same ultra low level detection limits used for drinking water samples. Those detection limits varied greatly depending on dilutions needed for the analyses. Thus, the sums of PAH at any one particular well may be derived from

different numbers of PAH and different detection limits. Since results below detection are summed as zero, in accordance with CD-RAP Appendix A, Section A.3, the trend calculations may be biased. Based on the calculations done for this report, only wells W421 and W426 showed increasing trends (for CPAH). The remaining Platteville Aquifer wells show stable or decreasing trends. CPAH at well W421 may be related to DNAPL that was observed in the well in recent years.

Figures 11, 12, and 13 are isoconcentration maps for the three CD-RAP drinking water criteria sums using the 2012 analytical results for Platteville Aquifer wells. High concentrations of PAH do not appear to be migrating downgradient of the source areas on and near the Reilly Site. Thus, remedial action goals are being met at the Site.

7.0 DRIFT AQUIFER

In accordance with the 2012 Sampling Plan, 24 samples were collected from 18 Drift Aquifer monitoring wells (including pumping wells) in 2012. Due to leaks in the discharge line, the first and second quarter samples from well W420 were not collected in 2012. In addition to water quality monitoring, ground water elevations were measured in the Drift Aquifer wells on the sampling dates (**Table 4**).

Table 8 is a historical summary of analytical results since 1988 for Drift Aquifer wells.

A depiction of groundwater elevation data, contours, and associated flow direction lines are shown in **Figure 14**. The groundwater capture shown in **Figure 14** was evaluated using water level data and the linear-log kriging algorithm developed by Papadopoulos and Associates, Inc. Summit used the KT3D_H2O computer code with Drift Aquifer water level data from **Table 4** to generate the potentiometric surface shown in **Figure 14**. Flow lines were then manually added to show areas where the long term pumping has generated hydraulic head gradients toward a pumping well. The following input parameters were used for the kriging:

Drift Term = 0

Model = Spherical

Nugget = 0

Variance = 1

Grid Size = 10 meters

Despite being out of service for more than a quarter of the year, the flow rate for well W420 averaged 27 gpm for the year (total amount pumped divided by 365 days), as measured and recorded by the City. The potentiometric surface map in **Figure 14** depicts the influence of pumping on water levels in the Drift Aquifer.

Water quality results in Drift Aquifer wells were assessed using statistical methods as shown in **Appendix A** and summarized in **Table 3**. The same caveat discussed for Platteville Aquifer samples is applicable for Drift Aquifer samples due to different test methods used over time. Based on the calculations done for this report, only well W420 showed an increasing trend (for CPAH). The remaining Drift Aquifer wells show stable or decreasing trends.

Figures 15, 16, and 17 are isoconcentration maps for the three CD-RAP drinking water criteria sums using the 2012 analytical results for Drift Aquifer wells. High concentrations of PAH do not appear to be migrating downgradient of the source areas on and near the Reilly Site. Thus, remedial action goals are being met at the Site.

8.0 DATA QUALITY ASSESSMENT

Based on the data quality assessment in last year's annual monitoring report, all of the 2012 laboratory data packages from Test America Laboratories underwent full data validation. The data validation reports are appended to each data package provided on the disk accompanying this report. In accordance with standard validation procedures, corrections to the data were made in the form of adding qualifiers, rejecting results, or other changes indicated by the validation process. Thus, the validated sums for various groups of PAH may be different than the sums calculated using raw data. This was the first time since monitoring began in 1988 that the raw data were not used to calculate the sums. This change was made due to anomalous data noted in last year's report and quality issues outlined in the attached validation reports.

The data validation guidelines were defined in the Quality Assurance Project Plan (QAPP). The validation was conducted as follows. The number of samples was checked to verify that the results corresponded to the analytical requests designated on the chain of custody. The chain of custody was examined to determine the completeness pertaining to sampling dates, times, quantities, and analyses performed. The sample holding times, preservation, and cooler temperatures were noted. The method blanks, field blanks, equipment blanks, and trip blanks were examined for any contamination problems. Surrogate spike recoveries were checked to confirm they were within the range determined by the QAPP quality control (QC) limits. Matrix spikes and laboratory control samples (LCS) were reviewed to confirm they meet the QC acceptance criteria. All duplicate samples were checked for precision. In addition, sample quantitation limits (SQLs) were compared to those required in the QAPP. Validation included a review of the gas chromatography/mass spectrometry (GC/MS) tuning, the initial and continuing calibrations, and internal standard performance.

Issues noted in the validation reports associated with the Test America data included the following:

- PAH were found in field blanks and method blanks, which should be free of PAH. These findings impact samples that contain the same PAH compounds at concentrations within five times the level found in the blanks.
- Surrogate recoveries were outside acceptable limits in some samples, mostly too low. Samples affected by low surrogate recoveries had some PAH qualified as estimated values (biased low) and non-detected values were rejected.
- Matrix spike and matrix spike duplicate (MS/MSD) pairs contained PAH outside acceptable recovery limits. This problem also resulted in some data qualified as estimated and non-detected values were rejected.
- Laboratory control samples occasionally had low recoveries for acridine and less frequently for perylene, resulting in the data qualified as estimated low and non-detected values were rejected.

Parent and duplicate samples generally showed relative percent differences within 25% for PAH that were detected at least five times the detection limit. As indicated in the attached validation reports, some data were qualified as estimated or non-detect based on discrepancies between the analyses.

The review of PAH data reported by Pace Analytical Services resulted in the qualification of acenaphthylene, acenaphthene, and fluoranthene as estimated due to MS/MSD percent recoveries. The reported results may be biased low.

As noted above, data for many of the project-specific compounds reported by Test America have been qualified or rejected due to low and extremely low matrix spike recoveries. Extremely low percent recoveries have frequently caused rejection of non-detect results for the following compounds: benzo (a) pyrene, benzo (e) pyrene, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (g,h,i) perylene, dibenz (a,h) anthracene, indeno (1,2,3-cd) pyrene, and perylene. Based on the results of quality control samples, the laboratory has been having difficulties with this method for the analysis of the St. Louis Park for several years.

During the third quarter of 2012, additional 1-liter aliquots were collected from sample locations W105, SLP6, E7, and W23 and submitted to Alpha Analytical (Alpha) in MA for comparison. Alpha has a suite of compounds for a non-related project which contains the priority pollutant PAH compounds only and not all 31 St. Louis Park analytes. Each laboratory was also instructed to perform MS/MSD analyses on E7. Overall, paired results for the unspiked samples compared very well. The MS/MSD recoveries for the priority pollutant PAHs reported by Alpha were very good, all of which were above 80% recovery and many of which were above 90% recovery. The MS/MSD recoveries reported by Test America were consistent with those reported for other sampling events with extremely low percent recoveries for benzo (a) pyrene, benzo (e) pyrene, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (g,h,i) perylene, dibenz (a,h) anthracene, indeno (1,2,3-cd) pyrene, and perylene.

The overall usability of the data is not compromised even though consistently low MS/MSD recoveries caused many of the Test America non-detect results to be rejected during the data validation process. Paired results reported from each of the two laboratories compared well, and the MS/MSD recoveries reported by Alpha were excellent. Reported concentrations have not varied significantly over the analytical program for any of the sample locations further supporting the usability of the data.

Because none of the samples exceeded the Drinking Water Criteria or the Advisory Levels based on changes to the various PAH sums as a result of validation, the overall usability of the data is not impacted. The QAPP gives a project completeness goal of 95% which was not met in 2012 due to the amount of data rejected. However, the normal procedure to resample and produce additional laboratory analyses was not recommended because these quality issues are reproduced with each analysis. The laboratory provided information for last year's annual monitoring report (Section 9) that indicates that the challenges they face in performing this method will continue to present the data quality issues noted in the validation reports.

9.0 References

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Tables

Table 1
Historical Summary of Other PAH and
CPAH Analytical Results
1988 through 2012

Mt. Simon SLP11,12,13

All concentrations reported in nanograms per liter (ng/l).

SLP11		
Sampling Date	Total CPAH ¹	Total Other PAH ²
6-88	0 ³	42
6-89	0	34
3-90	Out of Service	
3-91	0	43
5-92	0	43
3-93	0	50
3-94	0	66
10-95	3	113
6-96	0	109
10-97	0	78
5-98	0	70
5-99	0	151
9-00	0	22
8-01	0	19
9-02	Out of Service	
8-03	46	37
2-04	0	26
3-04	0	22
8-04	0	24
9-05	0	27
5-06	3/1	25
5-07	0	29
8-08	0	28
5-09	0	10
9-10	0	11
9-11	0	92
6-12	0	0

SLP12		
Sampling Date	Total CPAH ¹	Total Other PAH ²
6-88	0	11
6-89	0	16
3-90	0	109
3-91	0	21
5-92	1	25
3-93	0	9
3-94	0	21
10-95	0	9
6-96	0	3
10-97	0	12
5-98	0	3
9-99	0	10
9-00	0	11
8-01	0	2
9-02	3	7
8-03	0	2
8-04	0	20
9-05	0	5
8-06	0	4
5-07	0	4
8-08	0	1
5-09	0	0
9-10	0	2
9-11	0	4
6-12	0	0

SLP13		
Sampling Date	Total CPAH ¹	Total Other PAH ²
6-88	0	15
6-89	0	9
3-90	0	14
3-91	0	13
5-92	2	11
6-93	0	11
12-94	0	28
10-95	0	9
6-96	0	5
10-97	0	22
5-98	0	4
5-99	0	15
9-00	0	6
8-01	0	0
9-02	0	0
8-03	0	0
8-04	Out of Service	
9-05	0	10
5-06	3	8
5-07	0	5
8-08	0	11
5-09	0	0
9-10	0	4
9-11	Out of Service	
6-12	0	0

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	chrysene	quinoline*
benzo(a)pyrene	dibenzo(a,h)anthracene	benzo(j)fluoranthene**
benzo(b)fluoranthene	indeno(1,2,3-cd)pyrene	benzo(g,h,i)perylene

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore, if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	benzo(e)pyrene	2,3-dihydroindene	1-methylnaphthalene
acenaphthylene	benzo(b)thiophene	fluoranthene	2-methylnaphthalene
acridine	biphenyl	fluorene	naphthalene
anthracene	carbazole	indene	perylene
benzo(k)fluoranthene	dibenzothiophene	indole	phenanthrene
2,3-benzofuran	dibenzofuran		pyrene

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

Table 2

**Historical Summary of Other PAH and
CPAH in Well W105
1988 Through 2012**

All concentrations reported in nanograms per liter (ng/l).

W105		
Sampling Date	Total CPAH ¹	Total Other PAH ²
2-88	0 ³	9,000
6-88	0	2,400
9-88	0	3,670
12-88	0	2,035
6-89	0	1,400
12-89	0	1,086
5-90	0	2,347
8-90	0	2,600
5-91	9.5	2,164
8-91	0	1,014
2-92	0	2,185
6-92	355	5,057
11-92	21	8,961
1-93	38	1,797
1-93	23	1,966
3-94	60	2,576
5-96	29	2,746
4-98	0	5,493
5-00	89	5,593
6-02	142	5,247
5-04	33	2,363
5-06	200	5,725
5-08	195	14,546
3-09	273	4,107
3-09	166	4,450
6-10	105	13,797
12-10	17	984
12-10	23	894
9-12	75	944

NOTES:

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	quinoline*
benzo(b)fluoranthene	benzo(j)fluoranthene**
chrysene	benzo(g,h,i)perylene
dibenzo(a,h)anthracene	

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo-(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	biphenyl	indene
acenaphthylene	carbazole	indole
acridine	dibenzofuran	1-methylnaphthalene
anthracene	dibenzothiophene	2-methylnaphthalene
benzo(k)fluoranthene	2,3-dihydroindene	naphthalene
2,3-benzofuran	fluoranthene	perylene
benzo(e)pyrene	fluorene	phenanthrene
benzo(b)thiophene		pyrene

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

Table 3 Summary of Statistical PAH Trends

Mt. Simon					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
SLP 11	Drinking Supply	24	No Change	No Change	Decreasing
SLP 12	Drinking Supply	25	No Change	No Change	Decreasing
SLP 13	Drinking Supply	23	No Change	No Change	Decreasing

Wonewoc					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
Well 105	Monitoring	32	Increasing	Increasing	No Change

Prairie Du Chien					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
E13	Drinking Supply	37	No Change	No Change	Increasing
E15	Drinking Supply	30	No Change	No Change	No Change
E2	Drinking Supply	30	No Change	No Change	Decreasing
E3	Drinking Supply	25	No Change	No Change	Decreasing
E7	Drinking Supply	15	No Change	No Change	Increasing
H6	Drinking Supply	18	No Change	No Change	No Change
MTK6	Drinking Supply	8	No Change	No Change	No Change
SLP 10	Drinking Supply	26	No Change	Increasing	No Change
SLP 14	Drinking Supply	25	No Change	No Change	Decreasing
SLP 16	Drinking Supply	23	No Change	No Change	Decreasing
SLP 4	Drinking Supply	32	No Change	No Change	Decreasing
SLP 6	Drinking Supply	76	No Change	No Change	Increasing
W119	Irrigation	22	No Change	Increasing	Decreasing
W23	Pumping	43	Increasing	Increasing	Decreasing
W29	Industrial	23	No Change	No Change	Decreasing
W401	Irrigation	29	No Change	Decreasing	No Change
W402	Monitoring	26	No Change	Decreasing	Decreasing
W403	Monitoring	27	Increasing	Increasing	Decreasing
W406	Irrigation	19	No Change	No Change	Decreasing
W48	Irrigation	60	No Change	No Change	Decreasing

Table 3 Summary of Statistical PAH Trends

St. Peter					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
W122	Monitoring		No Change	Decreasing	Decreasing
W129	Monitoring		No Change	No Change	No Change
W14	Monitoring		No Change	No Change	No Change
W24	Monitoring		No Change	No Change	Decreasing
W33R	Monitoring		No Change	No Change	Decreasing
W408	Monitoring		No Change	No Change	Decreasing
W409	Monitoring		No Change	Decreasing	No Change
W410	Pumping		No Change	No Change	Increasing
W411	Monitoring		No Change	No Change	Decreasing
W412	Monitoring		No Change	No Change	Decreasing
W414	Monitoring		No Change	No Change	No Change

Platteville					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
W101	Monitoring		No Change	No Change	Decreasing
W121	Monitoring		No Change	No Change	No Change
W130	Monitoring		No Change	No Change	No Change
W131	Monitoring		No Change	No Change	Decreasing
W143	Monitoring		No Change	No Change	No Change
W18	Monitoring		No Change	No Change	No Change
W20	Monitoring		No Change	Decreasing	Decreasing
W22	Monitoring		No Change	No Change	No Change
W27	Monitoring		No Change	No Change	Decreasing
W421	Pumping		Increasing	Increasing	Decreasing
W424	Monitoring		No Change	No Change	Decreasing
W426	Monitoring		No Change	Increasing	No Change
W428	Monitoring		No Change	No Change	Decreasing
W434	Monitoring		No Change	No Change	Decreasing
W437	Monitoring		No Change	No Change	Decreasing
W438	Monitoring		Decreasing	No Change	No Change

Table 3 Summary of Statistical PAH Trends

Drift					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
P109	Monitoring		No Change	No Change	Decreasing
P112	Monitoring		No Change	Decreasing	Decreasing
P307	Monitoring		No Change	No Change	Decreasing
P308	Monitoring		No Change	No Change	No Change
P309	Monitoring		No Change	No Change	Decreasing
P310	Monitoring		No Change	No Change	Decreasing
P312	Monitoring		No Change	No Change	Decreasing
W10	Monitoring		No Change	No Change	No Change
W117	Monitoring		No Change	No Change	Decreasing
W128	Monitoring		No Change	No Change	Decreasing
W136	Monitoring		No Change	Decreasing	No Change
W15	Monitoring		No Change	No Change	Decreasing
W2	Monitoring		No Change	No Change	No Change
W420	Pumping		Increasing	No Change	No Change
W422	Monitoring		No Change	No Change	Decreasing
W427	Monitoring		No Change	No Change	Decreasing
W439	Pumping		No Change	No Change	Decreasing
W9	Monitoring		No Change	No Change	No Change

Notes:

No Change means insufficient evidence to identify a significant trend at the specified level of significance.

Decreasing means statistically significant evidence of a decreasing trend at the specified level of significance.

Increasing means statistically significant evidence of an increasing trend at the specified level of significance.

See Appendix A for the statistical evaluation of PAH data.

Table 4 2012 Water Elevation Data

WELL	DATE	MP Elevation	DEPTH TO WATER	WL Elev
<i>St. Peter</i>				
W14	9/21/2012	891.49	16.12	875.37
W24		893.19	NM	NM
W33R	9/24/2012	893.99	28.00	865.99
W122	9/17/2012	918.58	63.17	855.41
W129	9/17/2012	916.33	49.86	866.47
W408	9/25/2012	923.53	52.20	871.33
W409	9/24/2012	923.61	55.89	867.72
W410		908.04	NM	NM
W411	9/21/2012	896.25	34.40	861.85
W412	9/21/2012	915.17	50.89	864.28
W414	9/24/2012	921.29	56.98	864.31
<i>Platteville</i>				
W18	9/21/2012	893.33	10.55	882.78
W20	9/26/2012	895.83	18.60	877.23
W22	9/20/2012	897.06	12.34	884.72
W27	9/24/2012	910.47	27.88	882.59
W101	9/18/2012	918.03	40.22	877.81
W121	9/20/2012	922.85	48.40	874.45
W130	9/21/2012	894.83	23.50	871.33
W131	9/18/2012	919.27	38.61	880.66
W143	9/20/2012	905.31	24.63	880.68
W421		895.86	NM	NM
W424	9/24/2012	917.57	35.12	882.45
W426	9/20/2012	923.95	41.57	882.38
W427	9/20/2012	919.4	38.42	880.98
W428	9/20/2012	919.4	38.84	880.56
W437	9/26/2012	913.18	30.88	882.30

Table 4 2012 Water Elevation Data

WELL	DATE	MP Elevation	DEPTH TO WATER	WL Elev
W438	9/25/2012	921.12	40.60	880.52
<i>Drift</i>				
P109	9/26/2012	895.11	13.62	881.49
P112	9/26/2012	903.8	23.40	880.40
P307	9/26/2012	913.1	33.14	879.96
P308	9/26/2012	923.29	41.63	881.66
P309	9/25/2012	925.16	43.72	881.44
P310	9/25/2012	921.48	40.88	880.60
P312	9/25/2012	919.45	41.47	877.98
W2	9/25/2012	897.96	12.00	885.96
W9	9/21/2012	891.21	9.30	881.91
W10	9/25/2012	892.03	9.85	882.18
W15	9/25/2012	894.47	10.58	883.89
W117	9/18/2012	917.75	39.45	878.30
W128	9/20/2012	922.89	47.84	875.05
W136	9/18/2012	919.17	38.15	881.02
W420		895.88		
W427	9/20/2012	919.4	38.42	880.98
W439		924.9		
<i>Prairie Du Chien</i>				
W402	6/28/2012	872.64	83.17	789.47
W403	6/27/2012	868.21	65.98	802.23
SLP 4	9/21/2012			726.57
SLP 5	9/21/2012			789.03
SLP 7	9/21/2012			793.59
SLP 8	9/21/2012			713.57
SLP 10	9/21/2012			771.31
SLP 14	9/21/2012			773.54
SLP 16	9/21/2012			734.84
E 2	9/21/2012			777.65
E 5	9/21/2012			793.05
E 6	9/21/2012			778.08
E 7	9/21/2012			760.77
E 8	9/21/2012			785.58
E 11	9/21/2012			693.87
E 13	9/21/2012			753.47
E 16	9/21/2012			788.44
E 18	9/21/2012			797.75
E 19	9/21/2012			763.05
E 20	9/21/2012			781.36

Table 5 Historical Summary of Other PAH and CPAH Analytical Results for
Prairie Du Chien-Jordan Aquifer Wells, 1988 through 2012

SLP4		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0 ³	244
10-89	0	232
3-90	0	210
6-90	2	239
11-92	3	309
3-93	0	237
6-93	0	259
3-94	0	552
10-94	1	571
9-95	3	561
12-95	6	229
6-96	0	431
9-96	0	526
4-97	0	596
9-97	0	533
4-98	0	440
9-98	1	361
11-98	5	91
5-99	0	485
8-99	0	328
5-00	0	465
9-00	0	376
5-01	3	397
5-02	0	281
5-03	0	249
5-04	0	248
9-05	0	107
5-06	0	185
5-07	0	99
4-08	0	107
5-09	0	107
6-10	0	156
9-11	0	118
9-12	0	140

SLP14		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	112
6-89	0	134
9-89	0	84
3-90	0	98
8-90	0	145
5-91	1	99
8-91	0	19
5-92	1	90
8-93	0	78
9-94	0	57
6-95	0	89
6-96	0	52
4-97	0	46
5-98	0	55
5-99	0	49
5-00	0	50
5-02	0	25
5-04	Out of Service	
5-06	82	17
7-06	0	14
8-06	0	19
8-08	0	28
6-10	30	46
7-10	0	10
7-10	0	9
6-12	0	5

W119		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	3
6-89	0	18
9-89	0	11
9-01	0	294
Well Out of Service in 2002		
10-03	1	196
5-04	0	126
8-04	0	226
5-05	0	152
9-05	0	140
5-06	0	210
8-06	0	148
5-07	0	136
8-07	0	138
8-08	0	105
5-09	0	76
8-09	0	124
6-10	0	95
9-10	0	131
6-11	0	61
9-11	3	95
6-12	0	26
9-12	3	62
12-12	1	99

SLP10		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	8,200
10-89	0	5,120
6-90	0	5,403
8-90	0	7,386
5-91	5	315
6-92	0	3,070
8-93	0	2,091
6-94	0	2,174
6-95	0	1,737
6-96	0	1,742
10-97	0	1,859
5-98	0	1,354
5-99	0	1,452
5-00	0	2,947
5-01	0	1,929
6-02	2	1,453
9-03	8	1,327
5-05	9	2,101
5-06	1	1,524
5-07	3	1,476
5-08	1	1,797
9-10	1	529
9-11	3	537
6-12	2	1,870

SLP6		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	33
10-88	0	55
6-89	7	52
9-89	0	36
10-89	0	40
3-90	0	45
6-90	3	80
8-90	0	117
10-90	0	68
8-91	0	123
5-92	1	123
11-92	0	173
3-93	0	212
6-93	0	113
2-94	1	74
6-95	0	88
6-96	1	180
8-96	0	178
10-96	0	189
1-97	0	236
2-97	0	210
3-97	0	277
6-97	0	217
5-98	0	146
8-98	0	173
8-99	0	174
5-00	0	218
8-01	0	158
11-01	0	138
3-02	0	181
5-02	0	189
9-02	0	219
10-02	0	178
3-03	0	124
5-03	0	165
8-03	5	137
11-03	0	238
3-04	0	235
5-04	0	161
8-04	0	244
11-04	0	187
3-05	0	205
5-05	0	197
9-05	3	188
11-05	0	194
3-06	0	127
5-06	0	275
8-06	6	220
11-06	0	151
3-07	0	196
5-07	0	139
8-07	0	220
11-07	0	168
3-08	0	173
4-08	0	140
8-08	0	196
11-08	0	213
3-09	0	212
5-09	0	144
8-09	0	221
11-09	0	213
3-10	0	198
6-10	0	251
9-10	0	192
12-10	0	183
3-11	0	183
6-11	1	190
9-11	0	188
6-12	0	228
9-12	2	205
12-12	0	123

Table 5 Historical Summary of Other PAH and CPAH Analytical Results for
Prairie Du Chien-Jordan Aquifer Wells, 1988 through 2012

SLP16		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	48
6-89	0	28
9-89	0	24
8-90	8	374
11-90	0	59
5-91	1	32
8-91	0	64
11-92	1	42
8-93	0	11
6-94	0	22
6-95	0	13
6-96	0	8
9-97	0	9
5-98	0	7
5-99	0	0
5-00	0	9
5-02	0	0
5-04	0	8
5-06	0	12
8-08	0	5
6-10	0	1
6-12	0	0

MTK6		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	4
6-89	0	12
6-90	5	22
5-91	0	17
5-92	4	19
8-93	0	7
6-94	0	8
6-95	0	15
6-96	0	4
4-97	0	3
5-98	0	0
5-99	0	2
5-00	0	3
5-02	0	0
5-04	0	8
5-06	0	14
4-08	0	0
9-10	0	3
6-12	0	0

E15		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	11
6-89	0	16
6-90	0	11
5-91	0	13
5-92	0	23
8-93	0	4
6-94	0	6
6-95	0	8
6-96	0	10
10-96	0	29
6-97	0	3
10-97	0	14
5-98	0	22
8-98	0	7
5-99	0	38
8-99	0	18
5-00	0	26
9-00	0	14
5-01	0	27
9-02	0	5
8-03	0	5
5-04	0	15
9-05	0	26
5-06	0	12
5-07	0	9
5-08	0	5
5-09	0	5
9-10	0	7
6-11	0	8
6-12	0	1

E13		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	4
6-89	0	20
9-89	0	6
6-90	0	13
8-90	2	23
5-91	1	11
8-91	0	12
5-92	0	43
8-93	0	4
6-94	0	3
6-96	0	3
10-96	0	4
4-97	0	38
10-97	0	8
5-98	0	21
8-98	0	36
5-99	0	15
8-99	0	35
5-00	0	39
9-00	0	49
5-01	0	41
5-02	0	80
8-03	7	87
5-04	0	116
9-05	0	208
10-05	0	169
11-05	0	172
5-06	0	112
5-07	9	155
5-08	0	158
5-09	0	169
9-10	0	142
6-11	0	154
9-11	2	155
6-12	0	177
7-12	0	137
8-12	0	186
9-12	2	150

E2		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	14
6-89	0	21
9-89	0	8
6-90	3	22
8-90	0	14
5-91	4	21
8-91	0	17
5-92	0	19
8-93	0	9
6-94	0	16
12-95	0	10
6-96	0	14
10-96	0	20
4-97	0	45
10-97	0	13
5-98	0	13
8-98	0	196
10-98	0	34
8-99	0	6
5-00	0	8
9-00	0	6
5-01	0	16
9-02	0	0
8-03	0	8
5-04	0	5
6-07	0	72
5-08	0	7
5-09	0	8
9-10	0	4
6-11	0	9
6-12	0	0

Table 5 Historical Summary of Other PAH and CPAH Analytical Results for
Prairie Du Chien-Jordan Aquifer Wells, 1988 through 2012

E3		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	15
6-89	0	15
6-90	1	17
8-91	0	13
5-92	4	21
8-93	0	5
6-94	0	7
6-95	0	8
6-96	0	3
6-97	0	4
5-98	0	3
5-99	0	0
5-00	0	0
5-01	0	16
5-02	0	0
8-03	0	1
5-04	0	4
9-05	0	5
5-06	0	8
5-09	0	0
9-10	0	2
6-11	0	3
6-12	0	15

E7		
Sampling Date	Total CPAH ¹	Total Other PAH ²
6-96	0	3
10-96	0	5
6-97	0	3
10-97	0	2
5-98	0	1
8-98	0	6
5-99	0	5
8-99	0	2
5-00	0	16
9-00	0	9
5-01	0	22
5-02	0	29
8-03	0	22
5-04	Out of Service	
9-12	7	50
10-12	0	12

W48		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	2,418
6-89	0	1,636
9-89	0	1,850
10-89	0	1,130
3-90	0	1,690
6-90	0	1,809
8-90	22	4,566
8-93	2	428
6-94	1	285
6-95	3	310
6-96	3	259
6-97	0	316
10-97	0	290
5-98	0	186
8-98	0	50
5-99	0	226
8-99	0	226
5-00	0	222
9-00	0	130
5-01	0	234
8-01	0	149
11-01	0	180
3-02	0	222
5-02	0	185
9-02	0	138
10-02	0	187
3-03	0	108
5-03	0	135
8-03	0	135
10-03	0	173
3-04	0	156
5-04	0	189
8-04	0	161
11-04	0	170
3-05	0	144
5-05	0	141
9-05	0	82
11-05	0	156

H6		
Sampling Date	Total CPAH ¹	Total Other PAH ²
8-88	0	19
6-89	0	16
6-90	0	15
5-91	0	16
5-92	0	16
8-93	0	3
6-94	0	6
6-95	0	3
6-96	0	3
4-97	0	2
5-98	0	5
5-99	0	5
5-00	0	5
5-02	0	0
5-04	0	6
5-06	5	99
4-08	0	16
9-10	0	96
6-12	0	38

Table 5 Historical Summary of Other PAH and CPAH Analytical Results for
Prairie Du Chien-Jordan Aquifer Wells, 1988 through 2012

Well	W48		
	Sampling Date	Total CPAH ¹	Total Other PAH ²
	3-06	0	154
	5-06	0	111
	8-06	0	169
	11-06	0	53
	3-07	0	154
	5-07	1	114
	8-07	0	156
	11-07	0	147
	3-08	0	132
	5-08	0	144
	8-08	0	191
	11-08	0	176
	5-09	0	156
	8-09	0	271
	11-09	1	225
	3-10	0	164
	6-10	1	187
	9-10	0	188
	12-10	0	152
	3-11	0	143
	6-11	0	151
	9-11	8	153
	12-11	0	145
	3-12	0	154
	6-12	0	101
	9-12	2	187
	12-12	0	190

Well	W401		
	Sampling Date	Total CPAH ¹	Total Other PAH ²
	8-88	0	12
	6-89	0	15
	6-90	0	27
	5-91	0	28
	5-92	0	10
	8-93	1	10
	6-94	0	8
	6-95	0	16
	6-96	0	19
	10-96	0	29
	6-97	0	174
	10-97	0	121
	5-98	0	66
	8-98	0	5
	5-99	0	64
	8-99	0	23
	5-00	0	105
	9-00	0	158
	5-01	0	295
	5-02	0	149
	8-03	0	60
	5-04	0	195
	10-05	0	92
	5-06	0	48
	5-07	0	41
	4-08	0	35
	5-09	0	42
	6-10	0	9
	9-11	0	48
	6-12	0	3

Well	W23		
	Sampling Date	Total CPAH ¹	Total Other PAH ²
	9-88	0	111,100
	12-88	0	123,100
	3-89	0	120,200
	6-89	0	117,600
	9-89	0	106,300
	3-90	0	129,100
	8-90	0	114,700
	3-91	0	87,800
	6-91	0	71,800
	9-91	0	91,200
	10-91	0	82,600
	2-92	0	67,600
	9-92	0	78,000
	6-94	0	60,000
	10-94	0	64,000
	5-95	4,000	128,000
	9-95	0	70,000
	4-96	0	48,000
	7-96	0	50,000
	4-97	0	34,000
	10-97	0	47,000
	2-98	0	0 ³
	11-98	0	42,090
	4-99	0	25,970
	8-99	0	14,850
	5-00	0	8,790
	9-00	0	37,980
	12-00	0	25,000
	4-01	472	25,840
	3-02	0	28,700
	6-02	654	29,832
	9-03	514	23,391
	5-04	275	17,796
	5-05	254	25,141
	5-06	111	12,181
	5-07	292	19,603
	5-08	215	18,793
	5-09	365	14,357
	6-10	313	19,088
	12-10	389	14,181
	6-11	144	12,830
	9-12	558	16,818

Well	W29		
	Sampling Date	Total CPAH ¹	Total Other PAH ²
	8-88	0	495
	6-89	28	338
	6-90	4	372
	5-91	6	405
	5-92	12	531
	8-93	39	1,887
	6-94	9	749
	6-95	0	1,164
	6-96	0	82
	4-97	0	418
	5-98	0	261
	5-99	0	99
	5-00	3	212
	5-01	3	175
	5-02	0	44
	5-03	0	62
	5-04	11	157
	9-05	0	21
	5-06	9	45
	5-07	1	14
	5-08	0	20
	5-09	1	27
	Well Not Accessible 2010-2011		
	6-12	1	92

Table 5 Historical Summary of Other PAH and CPAH Analytical Results for
Prairie Du Chien-Jordan Aquifer Wells, 1988 through 2012

W402			W403			W406		
Sampling Date	Total CPAH ¹	Total Other PAH ²	Sampling Date	Total CPAH ¹	Total Other PAH ²	Sampling Date	Total CPAH ¹	Total Other PAH ²
9-89	0	151	8-88	0	57	6-89	0	36
6-90	47	720	6-89	40	974	10-89	0	26
8-90	16	133	9-89	0	177	6-90	8	43
5-91	16	408	8-90	49	1,102	8-90	15	119
8-91	0	18,320	5-91	110	976	5-91	1	30
6-92	12	895	8-91	0	11,570	8-91	1	40
8-93	7	145	6-92	19	816	5-92	6	53
6-94	5	104	8-93	7	516	8-93	0	22
6-95	0	567	6-94	7	1,271	6-94	0	31
6-96	13	383	6-95	0	543	6-95	0	34
4-97	0	257	6-96	3	182	6-96	0	21
5-98	0	349	4-97	0	172	4-97	0	27
5-99	1	545	5-98	0	11	5-98	0	15
5-00	0	1,287	5-99	0	169	5-99	0	28
5-01	0	267	5-00	0	195	5-00	0	30
5-02	13	165	5-01	0	458	5-02	Out of Service	
5-03	3	56	5-02	3	134	5-04	0	10
5-04	73	67	5-03	125	66	5-06	2	21
5-05	96	88	5-04	131	88	8-08	0	11
5-06	3	92	9-05	4	83	6-10	0	7
5-07	9	67	5-06	2	74	6-12	0	8
4-08	0	48	5-07	302	304			
5-09	0	149	5-08	1003	796			
6-10	1	77	5-09	450	796			
9-11	0	72	6-10	121	162			
6-12	0	24	9-11	178	91			
			6-12	165	140			

NOTES:

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a)anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	quinoline*
benzo(b)fluoranthene	benzo(j)fluoranthene**
chrysene	benzo(g,h,i)perylene
dibenz(a,h)anthracene	

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	biphenyl	indene
acenaphthylene	carbazole	indole
acridine	dibenzofuran	1-methylnaphthalene
anthracene	dibenzothiophene	2-methylnaphthalene
benzo(k)fluoranthene	2,3-dihydroindene	naphthalene
2,3-benzofuran	fluoranthene	perylene
benzo(e)pyrene	fluorene	phenanthrene
benzo(b)thiophene		pyrene

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

Table 6
Historical Summary of Other PAH and
CPAH Analytical Results for St. Peter Aquifer Wells
1988 Through 2012

All concentrations reported in nanograms per liter (ng/l)

W33R		
Sampling Date	Total CPAH ¹	Total Other PAH ²
5-07/8-07	14	778
5-08	2	497
8-08	15	182
5-09	45	883
8-09	11	109
6-10	14	122
9-10	31	96
6-11	0	27
9-12	0	0

W414		
Sampling Date	Total CPAH ¹	Total Other PAH ²
6-11	4	47
9-12	0	0

W14		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	57	95
10-88	0	439
6-11	75	98
9-12	0	0

W129		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	0	88
10-88	0	290
6-89	0	27
10-89	0	43
6-90	0	143
8-90	0	96
4-91	27	159
8-91	0	430
6-92	47	247
11-92	5	296
4-93	15	121
7-93	2	53
5-94	0	171
11-94	2	110
5-95	12	94
10-95	0	55
6-96	0	53
10-96	0	75
4-97	0	104
10-97	0	181
4-98	9	88
9-98	0	8
5-99	1	79
8-99	0	80
5-00	26	223
9-00	8	150
6-11	22	534
9-12	0	160

W24		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	0	3,309
10-88	0	3,622
4-91	0	4,023
8-91	0	4,160
6-92	0	3,380
11-92	0	3,650
4-93	0	2,950
7-93	0	3,294
5-94	0	2,669
11-94	0	4,029
5-95	0	3,190
10-95	0	1,550
5-96	0	974
10-96	0	1,603
4-97	0	1,513
10-97	0	1,340
4-98	0	689
9-98	0	1,120
4-99	0	2,085
9-99	0	3,590
5-00	0	940
5-01	0	152
9-01	0	619
6-02	0	439
9-02	0	307
6-03	0	335
9-03	0	246
5-04	0	212
8-04	0	188
5-05	0	102
9-05	0	130
5-06	11	72
8-06	0	93
5-07	0	65
5-08	0	24
8-08	0	53
5-09	0	26
8-09	0	51
6-10	0	82
9-10	0	38
6-11	0	40
9-12	0	3580

NOTES:

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	quinoline*
benzo(b)fluoranthene	benzo(j)fluoranthene**
chrysene	benzo(g,h,i)perylene
dibenz(a,h)anthracene	

*Quinoline is included in the sum of CPAH if other CPAHs were detected.

If no CPAHs are detected, quinoline is included with the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	2,3-dihydroindene
acenaphthylene	fluoranthene
acridine	fluorene
anthracene	indene
benzo(k)fluoranthene	indole
2,3-benzofuran	1-methylnaphthalene
benzo(e)pyrene	2-methylnaphthalene
benzo(b)thiophene	naphthalene
biphenyl	perylene
carbazole	phenanthrene
dibenzofuran	pyrene

Compounds in bold are priority pollutant PAH - the only compounds analyzed in 2012.

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit.

Table 6
Historical Summary of Other PAH and
CPAH Analytical Results for St. Peter Aquifer Wells
1988 Through 2012

All concentrations reported in nanograms per liter (ng/l)

W122		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	21	142
10-88	0	2,246
6-89	20	965
10-89	15	114
4-91	36	757
8-91	10	853
6-92	43	568
11-92	7	179
4-93	32	308
7-93	24	330
5-94	23	583
10-94	10	374
5-95	0	281
10-95	11	220
6-96	0	144
10-96	0	235
4-97	0	256
10-97	0	243
4-98	7	370
9-98	0	99
5-99	0	71
8-99	7	46
5-00	39	65
9-00	6	142
5-01	0	92
8-01	0	24
5-02	0	92
9-02	5	73
5-03	29	73
8-03	6	134
5-04	100	69
8-04	1	79
5-05	78	88
9-05	6	78
5-06	8	63
8-06	1	88
5-07	13	79
8-07	9	54
5-08	11	104
8-08	0	95
5-09	0	329
8-09	2	194
6-10	4	282
9-10	5	243
6-11	6	22
9-12	0	48

W408		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	2	151
10-88	0	34
6-89	5	145
10-89	0	110
6-90	0	24
8-90	28	130
4-91	13	343
8-91	25	1,163
6-92	32	283
11-92	2	172
4-93	4	150
7-93	6	217
5-94	5	70
11-94	0	170
5-95	9	143
10-95	15	135
6-96	0	66
10-96	0	103
4-97	0	169
10-97	0	166
4-98	1	96
9-98	0	62
5-99	0	64
8-99	2	51
5-00	89	103
9-00	0	53
6-11	2	41
9-12	0	0

W409		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	159	2,198
10-88	0	890
6-89	53	571
10-89	0	830
6-90	0	141
8-90	43	200
4-91	0	360
8-91	0	3,833
6-92	0	49,660
11-92	0	49,399
4-93	0	50,060
7-93	0	42,440
5-95	0	173,000
10-95	0	167,000
4-96	0	805,420
10-96	0	312,500
5-97	0	157,000
9-97	0	64,000
5-98	0	159,200
9-98	0	107,700
4-99	0	446,860
8-99	0	342,000
5-00	0	1,196,900
9-00	620	468,710
5-01	0	269,800
8-01	0	228,300
5-02	0	324,300
9-02	0	135,200
5-03	0	170,600
8-03	0	213,700
5-04	0	152,200
8-04	0	125,800
5-05	0	148,300
9-05	0	91,300
5-06	0	48,480
8-06	0	33,000
5-07	0	28,800
8-07	0	18,170
5-08	0	28,200
8-08	0	35,900
5-09	0	1,600
8-09	0	29,000
6-10	0	18,170
9-10	0	8,623
6-11	0	15,289
9-12	0	8,351

Table 6
Historical Summary of Other PAH and
CPAH Analytical Results for St. Peter Aquifer Wells
1988 Through 2012

All concentrations reported in nanograms per liter (ng/l)

W410		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	0	1,288
10-88	0	1,435
6-89	5	424
10-89	0	357
4-91	0	85
8-91	0	5,330
2-92	0	14,070
6-92	0	12,850
11-92	0	16,470
4-93	0	17,600
7-93	0	16,609
5-94	0	14,505
10-94	0	20,880
5-95	0	21,640
10-95	0	13,940
5-96	0	15,970
10-96	0	14,170
4-97	0	14,690
10-97	0	10,150
4-98	0	8,620
5-98	0	1,900
9-98	0	9,690
11-98	0	5,942
3-99	0	8,780
4-99	0	21,606
9-99	0	8,780
11-99	0	3,800
2-00	0	4,750
5-00	0	6,502
9-00	0	6,269
12-00	0	1,500
3-01	0	2,940
5-01	0	6,217
9-01	0	2,854
3-02	0	2,090
6-02	0	2,142
9-02	0	3,327
6-03	0	4,593
9-03	0	4,332
5-04	0	4,489
8-04	0	7,086
5-05	0	7,701
9-05	0	10,553
5-06	0	9,545
8-06	0	8,359
5-07	0	17,690
5-09	0	32,718
8-09	0	61,812
6-10	0	53,603
9-10	0	62,470
6-11	0	82,505
10-12	0	32,720

W411		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	0	1,274
10-88	0	1,161
6-89	8	200
10-89	0	460
6-90	15	451
8-90	0	336
4-91	12	384
8-91	0	251
6-92	24	313
11-92	1	181
4-93	7	189
7-93	5	113
5-94	3	120
11-94	6	219
5-95	6	235
10-95	1	183
6-96	0	79
10-96	0	253
4-97	0	82
10-97	3	253
4-98	1	120
9-98	61	424
5-99	0	99
8-99	0	79
5-00	0	56
9-00	17	138
5-01	0	124
8-01	0	46
5-02	0	34
9-02	0	16
5-03	38	113
8-03	0	57
5-04	97	107
8-04	0	90
5-05	43	75
9-05	3	76
5-06	1	56
8-06	0	68
5-07	4	84
8-07	1	93
5-08	0	84
8-08	0	95
5-09	0	114
8-09	0	22
6-10	2	183
9-10	0	197
6-11	0	26
9-12	0	0

W412		
Sampling Date	Total CPAH ¹	Total Other PAH ²
7-88	8	1,309
10-88	0	209
6-89	18	211
10-89	0	132
8-90	1	484
4-91	48	1,470
8-91	0	5,283
6-92	12	1,319
11-92	0	3,796
4-93	154	842
7-93	16	777
5-94	25	291
10-94	10	538
5-95	18	369
10-95	0	402
5-96	0	139
10-96	0	1,620
4-97	0	806
10-97	0	614
4-98	30	260
9-98	60	557
4-99	20	267
9-99	0	764
5-00	250	105
9-00	1	164
5-01	4	363
8-01	0	1,125
5-02	10	243
9-02	3	135
5-03	12	82
8-03	15	130
5-04	84	129
8-04	11	236
5-05	85	132
9-05	3	115
5-06	21	118
8-06	9	246
5-07	3	54
8-07	2	255
5-08	15	297
8-08	0	710
5-09	0	530
8-09	0	450
6-10	0	207
9-10	0	10
6-11	21	72
9-12	0	46

Table 7
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W18			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
8-88	0	0	20
10-88	0	361	20
6-89	0	39	44
2-92	0	10	8
5-96	0	2	NA
9-96	0	2	NA
4-97	0	1	NA
9-97	0	1	NA
5-98	0	1	NA
9-98	0	0	NA
5-99	0	1	NA
9-99	0	1	NA
5-00	0	1	NA
9-00	0	1	NA
9-11	0	8	NA
9-12	0	8	NA

W22			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
5-90	0	0	0
2-92	0	1	0
3-92	0	5	NA
5-96	0	0	NA
9-96	0	0	NA
4-97	0	2	NA
9-97	0	2	NA
4-98	0	1	NA
9-98	0	8	NA
4-99	0	22	NA
9-99	0	24	NA
5-00	0	3	NA
9-00	0	42	NA
6-11	0	0	NA
6-12	0	0	NA
9-12	0	0	NA

W101			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
8-88	0	4	7
10-88	0	23	0
6-89	0	48	20
5-90	0	22	0
2-92	0	18	6
5-94	0	11	0
5-96	0	5	NA
10-96	0	32	NA
4-97	0	31	NA
9-97	0	15	NA
4-98	0	17	NA
9-98	0	125	NA
4-99	0	32	NA
9-99	0	24	NA
5-00	0	41	NA
9-00	0	32	NA
4-01	0	18	NA
9-01 ⁴	0	12	NA
5-02	0	17	NA
9-02	0	6	NA
5-03	0	14	NA
8-03	0	3	NA
5-04	0	19	NA
8-04	0	3	NA
5-05	0	3	NA
9-05	0	2	NA
5-06	0	2	NA
8-06	0	3	NA
5-07	0	8	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	10	NA
6-10	0	0	NA
9-10	0	0	NA
9-11	0	0	NA
9-12	0	0	NA

W20			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
8-88	0	0	28
10-88	0	3	16
6-89	0	6	34
5-90	0	7	9
5-94	0	1	0
5-96	0	1	NA
9-96	0	1	NA
4-97	0	2	NA
10-97	0	2	NA
5-98	0	1	NA
9-98	0	0	NA
5-99	0	1	NA
9-99	0	1	NA
5-00	0	1	NA
9-00	0	1	NA
5-01	0	0	NA
8-01 ⁴	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	6	NA
8-03	0	5	NA
5-04	0	2	NA
8-04	0	0	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	4	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA
6-10	0	0	NA
9-10	0	0	NA
6-11	0	0	NA
9-12	0	0	NA

W27			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
10-88	0	1,882	NA
6-89	0	1,345	NA
5-96	0	1	NA
10-96	0	9	NA
4-97	0	281	NA
9-97	0	416	NA
4-98	0	184	NA
9-98	0	422	NA
4-99	0	312	NA
8-99	0	158	NA
5-00	0	415	NA
9-00	0	243	NA
5-01	0	199	NA
8-01 ⁴	0	99	NA
5-02	0	123	NA
9-02	0	193	NA
5-03	0	89	NA
8-03	0	85	NA
5-04	0	196	NA
8-04	0	116	NA
5-05	0	143	NA
9-05	0	106	NA
5-06	0	133	NA
8-06	0	118	NA
5-07	0	77	NA
8-07	0	97	NA
5-08	0	48	NA
8-08	0	109	NA
5-09	0	76	NA
8-09	0	121	NA
6-10	0	54	NA
9-10	1	69	NA
6-11	0	79	NA
9-12	0	64	NA

W121			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
8-88	0	0	73
10-88	0	0	35
6-89	0	0	35
5-90	0	0	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA
9-11	0	0	NA
9-12	0	0	NA

Table 7
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W131			
Sampling Date	Total CPAH'	Total Other PAH ^c	Total Phenolics
8-88	0	0	0
10-88	0	0	13
6-89	0	0	0
2-92	0	13	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
5-01	0	0	NA
8-01 ⁴	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	2	NA
8-04	0	3	NA
5-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	2	NA
5-07	0	0	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA
6-10	0	0	NA
9-10	0	0	NA
9-11	0	0	NA
9-12	0	4	NA

W130			
Sampling Date	Total CPAH'	Total Other PAH ^c	Total Phenolics
8-88	0	0	0
10-88	0	0	0
6-89	0	0	0
5-90	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
10-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA
6-11	0	0	NA
9-12	0	0	NA

W143			
Sampling Date	Total CPAH'	Total Other PAH ^c	Total Phenolics
8-88	0	0	0
10-88	0	0	0
6-89	0	1	33
5-96	0	1	NA
10-96	0	1	NA
4-97	0	9	NA
9-97	0	1	NA
4-98	0	4	NA
9-98	0	10	NA
4-99	0	15	NA
9-99	0	4	NA
5-00	0	0	NA
5-01	0	5	NA
9-01 ⁴	0	3	NA
5-02	0	10	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
5-04	0	0	NA
8-04	0	3	NA
5-05	0	6	NA
9-05	0	2	NA
5-06	0	14	NA
8-06	0	3	NA
5-07	0	3	NA
8-07	0	0	NA
5-08	0	0	NA
8-08	0	2	NA
5-09	0	0	NA
8-09	0	8	NA
6-10	0	0	NA
9-10	0	0	NA
9-11	0	0	NA
9-12	0	0	NA

W424			
Sampling Date	Total CPAH'	Total Other PAH ^c	Total Phenolics
8-88	0	0	10
10-88	0	0	0
6-89	0	1	17
5-90	0	0	0
2-92	0	5	0
3-92	0	11	0
5-94	0	0	0
5-96	0	0	NA
10-96	0	0	NA
4-97	0	0	NA
9-97	0	0	NA
5-98	0	0	NA
9-98	0	0	NA
5-99	0	0	NA
9-99	0	0	NA
5-00	0	0	NA
9-00	0	0	NA
6-11	0	0	NA
9-12	0	0	NA

W426			
Sampling Date	Total CPAH'	Total Other PAH ^c	Total Phenolics
8-88	1	905	25
10-88	0	639	35
6-89	0	498	80
2-92	0	82	15
3-92	0	47	NA
5-96	0	55	NA
4-97	0	76	NA
9-97	0	64	NA
4-98	0	108	NA
9-98	0	1,508	NA
4-99	0	642	NA
8-99	0	258	NA
5-00	0	112	NA
9-00	0	160	NA
5-01	0	131	NA
8-01 ⁴	0	32	NA
5-02	0	564	NA
9-02	0	271	NA
5-03	0	574	NA
8-03	0	289	NA
5-04	0	636	NA
8-04	0	218	NA
5-05	0	601	NA
9-05	0	415	NA
5-06	0	259	NA
8-06	0	262	NA
5-07	0	301	NA
8-07	0	144	NA
5-08	0	147	NA
8-08	0	267	NA
5-09	0	141	NA
8-09	0	116	NA
6-10	0	92	NA
9-10	0	37	NA
6-11	0	121	NA
9-12	0	231	NA

Table 7
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W421			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
1st Quarter	0	566	33
2nd Quarter	0	821	0
8-88	0	764	30
10-88	0	1,107	35
3-89	0	878	29
6-89	0	1,000	26
9-89	0	1,000	33
12-89	0	730	27
3-90	0	1,420	33
5-90	0	715	29
8-90	0	1,410	36
12-90	0	1,145	29
3-91	0	1,449	30
6-91	10	1,389	31
9-91	0	1,226	27
10-91	0	1,285	30
2-92	0	988	31
6-92	0	1,163	26
9-92	0	1,547	28
10-92	0	1,299	45
3-93	0	1,332	15
4-93	0	1,184	21
8-93	0	1,025	32
11-93	0	1,017	29
2-94	0	1,045	14
6-94	0	939	17
8-94	0	788	31
10-94	0	966	24
3-95	0	949	31
5-95	0	911	19
9-95	0	966	29
10-95	0	764	20
2-96	0	618	28
4-96	0	630	123
7-96	0	884	24
10-96	0	843	24
2-97	0	709	26
5-97	0	741	27
9-97	0	699	25
1-98	0	787	26
2-98	0	915	20
5-98	0	684	21
9-98	0	306	5
11-98	0	518	26
3-99	0	393	21
4-99	0	611	21
8-99	0	389	25
11-99	0	479	12
2-00	0	462	23
5-00	0	626	24
9-00	44	1,022	19
12-00	0	376	18
3-01	8	341	21
5-01	7	717	29
8-01	31	415	23
10-01	36	266	27
3-02	6	557	7
5-02	3	410	NA
9-02	0	551	NA
10-02	5	530	NA
3-03	430	1,302	NA
5-03	310	2,112	NA
8-03	5	545	NA
11-03	715	4,396	NA
3-04	23	675	NA
4-04	0	619	NA
8-04	13	780	NA
11-04	18	995	NA
3-05	8	532	NA

W421			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
5-05	0	518	NA
9-05	0	533	NA
11-05	6	407	NA
3-06	0	645	NA
5-06	0	539	NA
8-06	2	577	NA
11-06	2	596	NA
3-07	36	655	NA
5-07	9	608	NA
8-07	22	797	NA
11-07	7	682	NA
3-08	106	868	NA
4-08	38	648	NA
5-09	14	525	NA
8-09	140	1,307	NA
11-09	171	1,731	NA
3-10	360	3,048	NA
6-10	111	818	NA
9-10	260	1,635	NA
12-10	74	993	NA
3-11	6.07	606	NA
6-11	180.7	2,131	NA
9-11	144	2,064	NA
12-11	392.1	2,822	NA
3-12	528	4,393	NA
9-12	153	1,565	NA
12-12	26	624	NA

W434			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
2-92	0	4	9
10-96	0	4	NA
4-97	0	7	NA
9-97 ^a	0	5	8
10-97	0	3	NA
1-98	0	4	0
2-98	0	3	5
5-98	0	3	5
9-98	0	73	0
11-98	0	12	0
3-99	0	14	0
4-99	0	1	0
8-99	0	1	6
11-99	0	1	0
2-00	0	2	0
5-00	0	5	3
9-00	0.3	4	0
12-00	0	1	0
3-01	0	3	5
5-01	0	6	6
9-01	0	4	NA
10-01	0	4	5
3-02	0	5	25
5-02	0	5	NA
9-02	0	5	NA
5-03	0	4	NA
8-03	0	3	NA
5-04	0	6	NA
8-04	0	3	NA
5-05	0	3	NA
9-05	0	3	NA
5-06	0	3	NA
8-06	0	3	NA
5-07	0	2	NA
8-07	0	2	NA
5-08	0	2	NA
8-08	0	2	NA
5-09	0	0	NA
6-10	0	2	NA
9-10	0	1	NA
9-11	0	1	NA
9-12	0	1	NA

Table 7
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Platteville Aquifer Wells

PAH and Phenolic concentrations in micrograms per liter (ug/l)

W428				W437				W438			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics	Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics	Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
8-88	0	0	0	2-92	0	3,096	20	2-92	0	20	5
10-88	0	1	8	3-92	0	489	NA	3-92	0	0	NA
6-89	0	1	16	5-01	0	6,305	NA	5-01	1	1	NA
5-90	0	0	0	8-01 ⁴	0	5,342	NA	9-01 ⁴	1	1	NA
2-92	0	2	6	5-02	0	5,438	NA	5-02	0	5	NA
3-92	0	9	NA	9-02	0	5,292	NA	9-02	0	0	NA
5-94	0	0	0	5-03	0	1,116	NA	5-03	0	0	NA
5-96	0	0	NA	8-03	0	5,977	NA	8-03	0	0	NA
10-96	0	0	NA	5-04	0	6,265	NA	5-04	0	0	NA
4-97	0	0	NA	8-04	0	4,553	NA	8-04	0	0	NA
5-98	0	0	NA	5-05	0	4,749	NA	5-05	0	0	NA
9-98	0	1	NA	9-05	0	5,802	NA	9-05	0	0	NA
5-99	0	1	NA	5-06	0	4,241	NA	5-06	0	0	NA
9-99	0	0	NA	8-06	0	5,443	NA	8-06	0	0	NA
5-00	0	2	NA	5-07	0	3,699	NA	5-07	0	0	NA
9-00	0	1	NA	8-07	0	3,703	NA	8-07	0	0	NA
5-01	0	2	NA	5-08	0	2,667	NA	5-08	0	0	NA
8-01 ⁴	0	0	NA	8-08	0	3,520	NA	8-08	0	0	NA
5-02	0	0	NA	5-09	0	2,507	NA	5-09	0	0	NA
9-02	0	0	NA	8-09	0	2,868	NA	8-09	0	0	NA
5-03	0	0	NA	6-10	0	1,248	NA	6-10	0	0	NA
8-03	0	0	NA	9-10	0	1,515	NA	9-10	0	0	NA
5-04	0	0	NA	6-11	0	907	NA	6-11	0	0	NA
8-04	0	0	NA	9-12	0	695	NA	9-12	0	0	NA
5-05	0	0	NA								
9-05	0	0	NA								
5-06	0	0	NA								
8-06	0	0	NA								
5-07	0	0	NA								
8-07	0	0	NA								
5-08	0	0	NA								
8-08	0	0	NA								
5-09	0	0	NA								
8-09	0	0	NA								
6-10	0	0	NA								
9-10	0	0	NA								
9-11	0	0	NA								
9-12	0	0	NA								

NOTES:

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a)anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	quinoline*
benzo(b)fluoranthene	benzo(j)fluoranthene**
chrysene	benzo(g,h,i)perylene
dibenz(a,h)anthracene	

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	biphenyl	indene
acenaphthylene	carbazole	indole
acridine	dibenzofuran	1-methylnaphthalene
anthracene	dibenzothiophene	2-methylnaphthalene
benzo(k)fluoranthene	2,3-dihydroindene	naphthalene
2,3-benzofuran	fluoranthene	perylene
benzo(e)pyrene	fluorene	phenanthrene
benzo(b)thiophene		pyrene

Compounds in bold are priority pollutant PAH - the only compounds analyzed since 2010.

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit, or were below 0.5 ug/l.

⁴ For this report, the analytical results prior to 2002 have been rounded to the nearest part per billion.

NA = Not analyzed for identified compound class.

Table 8
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Drift Aquifer Wells

All concentrations in micrograms per liter (ug/l).

P109				P307				P308			
Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics	Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics	Sampling Date	Total CPAH ¹	Total Other PAH ²	Total Phenolics
8-88	0 ³	3	8	4-91	0	226	18.5	4-91	0	98	10.5
10-88	0	4	0	8-01 ⁴	0	76	NA	2-92	0	0	11.7
6-89	0	4	15.5	5-02	0	42	NA	10-94	0	41	NA
5-90	0	5	0	9-02	0	89	NA	5-01	0	2	NA
4-01	0	1	NA	5-03	0	42	NA	8-01 ⁴	0	12	NA
9-01 ⁴	0	0	NA	8-03	0	60	NA	5-02	0	3	NA
5-02	0	0	NA	4-04	0	52	NA	9-02	0	0	NA
9-02	0	0	NA	8-04	0	68	NA	5-03	0	0	NA
5-03	0	0	NA	4-05	0	110	NA	8-03	0	0	NA
8-03	0	0	NA	9-05	0	122	NA	4-04	0	0	NA
4-04	0	0	NA	5-06	0	27	NA	8-04	0	2	NA
8-04	0	0	NA	8-06	0	140	NA	4-05	0	0	NA
4-05	0	0	NA	5-07	0	97	NA	9-05	0	0	NA
9-05	0	0	NA	8-07	0	78	NA	5-06	0	5	NA
5-06	0	0	NA	4-08	0	63	NA	8-06	0	0	NA
8-06	0	0	NA	8-08	0	41	NA	5-07	0	9	NA
5-07	0	0	NA	5-09	0	43	NA	8-07	0	4	NA
8-07	0	0	NA	8-09	0	46	NA	4-08	0	1	NA
4-08	0	0	NA	6-10	0	16	NA	8-08	0	1	NA
8-08	0	0	NA	9-10	0	15	NA	5-09	0	0	NA
5-09	0	0	NA	6-11	0	14	NA	8-09	0	0	NA
8-09	0	0	NA	9-12	0	11	NA	6-10	0	1	NA
6-10	0	0	NA					9-10	0	4	NA
9-10	0	0	NA					6-11	0	2	NA
6-11	0	0	NA					9-12	0	0	NA
9-12	0	0	NA								

¹ Total Carcinogenic PAHs (as listed in the CD/RAP (A.1.1)), consist of the sum of:

benzo(a) anthracene	indeno(1,2,3-cd)pyrene
benzo(a)pyrene	quinoline*
benzo(b)fluoranthene	benzo(j)fluoranthene**
chrysene	benzo(g,h,i)perylene
dibenz(a,h)anthracene	

*Quinoline is included in the sum of CPAH if other CPAHs were detected. If no CPAHs are detected, quinoline is included in the Total Other PAH.

**Benzo(j)fluoranthene will coelute with either benzo(b)fluoranthene or benzo(k)fluoranthene. Benzo(j)fluoranthene can not be consistently separated by the laboratory. Therefore if present, it will be reported as benzo(b)- and/or benzo(k)-fluoranthene.

² Total Other PAHs (as listed in the CD/RAP (A.1.2)), consists of the sum of:

acenaphthene	biphenyl	indene
acenaphthylene	carbazole	indole
acridine	dibenzofuran	1-methylnaphthalene
anthracene	dibenzothiophene	2-methylnaphthalene
benzo(k)fluoranthene	2,3-dihydroindene	naphthalene
2,3-benzofuran	fluoranthene	perylene
benzo(e)pyrene	fluorene	phenanthrene
benzo(b)thiophene		pyrene

Compounds in bold are priority pollutant PAH - the only compounds analyzed since 2010.

³ Result reported as 0 indicates that all parameters were not detected above the laboratory detection limit, or were below 0.5 ug/l.

⁴ For this report, the analytical results prior to 2002 have been rounded to the nearest part per billion.

NA = Not analyzed for identified compound class.

Table 8
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Drift Aquifer Wells

All concentrations in micrograms per liter (ug/l).

P112			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
8-88	0	0	0
10-88	0	0	8.6
6-89	0	0	35.7
5-90	0	0	0
2-92	0	0	0
5-01	0	0	NA
8-01 ⁴	0	0	NA
5-02	0	0	NA
9-02	0	0	NA
5-03	0	0	NA
8-03	0	0	NA
4-04	0	0	NA
8-04	0	0	NA
4-05	0	0	NA
9-05	0	0	NA
5-06	0	0	NA
8-06	0	0	NA
5-07	0	0	NA
8-07	0	0	NA
4-08	0	0	NA
8-08	0	0	NA
5-09	0	0	NA
8-09	0	0	NA
6-10	0	0	NA
9-10	0	0	NA
9-12	0	0	NA

P309			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
6-89	0	1	0
4-91	0	318	22.5
5-01	0	27	NA
8-01 ⁴	0	40	NA
5-02	0	50	NA
9-02	0	24	NA
5-03	0	91	NA
8-03	0	43	NA
4-04	0	38	NA
8-04	0	35	NA
4-05	0	75	NA
9-05	0	57	NA
5-06	0	47	NA
8-06	0	31	NA
5-07	0	47	NA
8-07	0	26	NA
4-08	0	20	NA
8-08	0	21	NA
5-09	0	16	NA
8-09	0	10	NA
6-10	0	12	NA
9-10	0	7	NA
6-11	0	7	NA
9-11	0	13	NA
6-12	0	11	NA
9-12	0	12	NA

W2			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
8-88	0	0	NA
10-88	0	0	NA
6-89	0	0	NA
5-94	0	0	NA
6-11	0	0	NA
9-11	0	0	NA
6-12	0	0	NA
9-12	0	0	NA

W9			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
6-11	0	9	NA
9-11	0	11	NA
6-12	0	0	NA
9-12	0	126	NA

W15			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
5-90	0	11	NA
2-92	1	8	NA
5-94	0	1	NA
6-11	0	0	NA
9-11	0	0	NA
6-12	0	0	NA
9-12	0	0	NA

P310			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
4-91	0	33	8
5-01	0	13	NA
8-01 ⁴	0	31	NA
5-02	0	14	NA
9-02	0	10	NA
5-03	0	16	NA
8-03	0	18	NA
4-04	0	14	NA
8-04	0	37	NA
4-05	0	31	NA
9-05	0	28	NA
5-06	0	11	NA
8-06	0	15	NA
5-07	0	12	NA
8-07	0	9	NA
4-08	0	5	NA
8-08	0	8	NA
5-09	0	2	NA
8-09	0	0	NA
6-10	0	3	NA
9-10	0	2	NA
6-11	0	1	NA
9-12	0	1	NA

W439			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
3-95	0	3,933	91
5-95	0	4,053	74
9-95	0	2,564	54
10-95	0	2,115	50
2-96	0	1,552	46
4-96	0	1,419	43
7-96	0	1,765	43
10-96	0	1,557	45
2-97	0	1,277	43
5-97	0	1,683	48
9-97	0	1,547	42
1-98	0	1,236	34
2-98	0	1,377	31
5-98	0	1,221	35
9-98	0	978	12
11-98	0	954	53
3-99	0	1,385	29
4-99	0	1,278	31
8-99	0	755	45
11-99	0	1,123	17
2-00	0	1,081	31
5-00	0	1,975	31
9-00	0	1,859	26
12-00	0	1,187	37
3-01	0	1,498	34
5-01	0	1,623	37
8-01	0	1,056	NA
10-01	0	1,095	42
3-02	0	1,205	27
5-02	0	1,214	NA
9-02	0	1,027	NA
5-03	0	981	NA
8-03	0	1,535	NA
4-04	0	1,260	NA
8-04	0	1800	NA
4-05	0	1396	NA
9-05	0	1,303	NA
5-06	0	1,327	NA
8-06	0	1,015	NA
5-07	0	898	NA
8-07	0	963	NA
4-08	0	1,776	NA
5-09	0	1,144	NA
8-09	0	1,308	NA
6-10	0	904	NA
9-10	0	788	NA
6-11	0	1,002	NA
9-11	0	433	NA
6-12	0	747	NA
9-12	0	484	NA

Table 8
Historical Summary of Other PAH, CPAH, and
Phenolic Analytical Results
1988 Through 2012

Drift Aquifer Wells

All concentrations in micrograms per liter (ug/l).

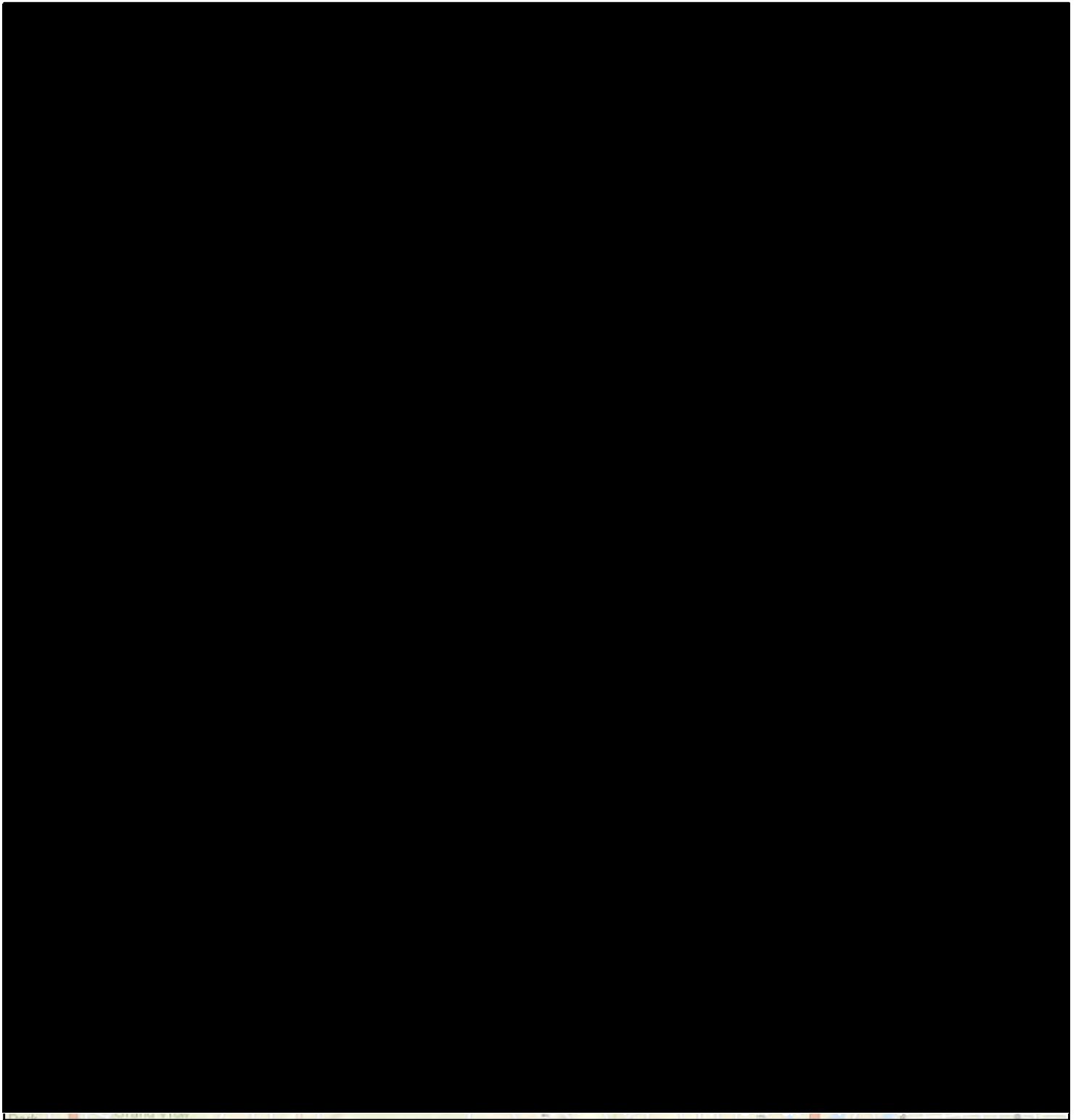
W420			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
3-88	0 ³	3,242	440
5-88	0	3,420	330
8-88	0	2,477	220
10-88	0	1,148	44
3-89	0	2,400	120
6-89	0	3,400	129
9-89	0	3,400	220
12-89	0	3,400	110
3-90	0	3,950	239
5-90	0	2,430	231
8-90	0	3,150	244
12-90	0	3,030	228
3-91	0	4,200	232
6-91	0	2,494	221
9-91	0	4,967	210
10-91	0	4,163	194
2-92	0	1,526	177
6-92	0	3,229	204
9-92	0	2,281	167
10-92	0	2,374	236
3-93	0	4,337	18
4-93	0	2,929	207
8-93	0	1,825	136
11-93	0	2,052	148
2-94	0	2,033	109
6-94	0	2,181	151
8-94	0	2,026	147
10-94	0	2,082	151
3-95	0	2,431	143
5-95	0	1,873	134
9-95	0	2,523	91
10-95	0	2,332	113
2-96	0	1,968	121
4-96	0	2,165	130
7-96	0	2,725	87
10-96	0	2,164	118
2-97	0	2,324	122
5-97	0	3,343	134
9-97	0	2,151	261
1-98	0	2,483	140
2-98	0	2,938	124
5-98	0	2,933	160
9-98	0	3,144	80
11-98	0	2,570	180
3-99	0	3,314	200
4-99	0	3,414	170
8-99	0	2,425	140
11-99	0	2,345	170
2-00	0	2,312	150
5-00	0	4,441	190
9-00	0	3,070	110
12-00	0	2,500	90
3-01	0	3,680	110
5-01	0	6,956	300
8-01	0	2,535	140
10-01	0	3,608	190
3-02	0	8,578	110
5-02	0	4,163	NA
9-02	0	3,981	NA
10-02	0	3,456	NA
3-03	0	3,558	NA
5-03	0	4,122	NA
8-03	0	3,148	NA
11-03	0	2,835	NA
3-04	0	3,776	NA
4-04	0	3,805	NA
8-04	0	3,167	NA
11-04	0	4,685	NA
3-05	0	4,005	NA
5-05	0	2,463	NA
9-05	0	4,447	NA
11-05	0	4,205	NA
3-06	0	3,605	NA

W420			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
5-06	0	3,511	NA
8-06	0	3,782	NA
11-06	0	3,682	NA
3-07	0	3,444	NA
5-07	0	3,029	NA
8-07	0	3,209	NA
11-07	0	3,539	NA
3-08	0	3,397	NA
4-08	0	3,514	NA
3-09	0	2,073	NA
5-09	0	3,168	NA
8-09	0	3,483	NA
11-09	0	3,492	NA
3-10	0	2,911	NA
6-10	0	2,623	NA
9-10	0	2,389	NA
12-10	0	2,202	NA
3-11	0	2,277	NA
6-11	0	2,252	NA
9-11	0	1,762	NA
12-11	0	1,371	NA
3-12	0	1,686	NA
9-12	0	1,950	NA
12-12	0	1,975	NA

W422			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
1st Quarter	0	27	11
2nd Quarter	0	57	0
8-88	0	77	24
10-88	0	50	84
3-89	0	50	11
6-89	0	50	14
9-89	0	60	20
12-89	0	50	13
3-90	0	75	21
5-90	0	60	14
8-90	0	90	14
12-90	0	60	18
4-91	0	67	13
9-91	0	-	17
10-91	0	88	18
2-92	0	121	16
6-92	0	872	-
9-92	0	91	9
10-92	0	89	28
3-93	0	94	0
4-93	0	96	10
8-93	0	81	16
11-93	0	74	16
2-94	0	61	0
6-94	0	66	7
8-94	0	66	30
10-94	0	59	11
3-95	0	54	11
5-95	0	62	5
9-95	0	53	14
10-95	0	29	10
2-96	0	24	12
4-96	0	26	11
7-96	0	26	9
10-96	0	23	8

W422			
Sampling Date	Total CPAH ¹	Total Other PAH ^c	Total Phenolics
2-97	0	21	9
5-97	0	20	11
9-97	0	19	18
1-98	0	18	11
2-98	0	21	6
5-98	0	17	9
9-98	0	7	0
11-98	0	13	9
3-99	0	20	0
4-99	0	14	8
8-99	0	13	10
11-99	0	13	4
2-00	0	12	10
5-00	0	19	10
9-00	0	13	5
12-00	0	6	4
5-01	0	19	5
9-01	0	13	-
10-01	0	7	5
3-02	0	15	11
5-02	0	15	NA
9-02	0	9	NA
5-03	0	9	NA
8-03	0	4	NA
4-04	0	4	NA
8-04	0	1	NA
4-05	0	7	NA
9-05	0	9	NA
5-06	0	7	NA
8-06	0	0	NA
5-07	0	6	NA
8-07	0	9	NA
4-08	0	28	NA
8-08	0	10	NA
5-09	0	7	NA
8-09	0	5	NA
6-10	0	14	NA
9-10	0	9	NA
9-12	0	12	NA

Figures



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

CMSH

Trend (See Table 3)

Decreasing or No Change

Increasing

REILLY SITE

SLP11

Well Name

--

Water Level

0

Sum of Benzo(a)pyrene and Dibenzo(a,h)anthracene (ug/L)

0

Sum of Carconogenic PAH parameters (ug/L)

0

Sum of Other PAH parameters (ug/L)

0

2,500

Feet

1 inch = 2,500 feet

N

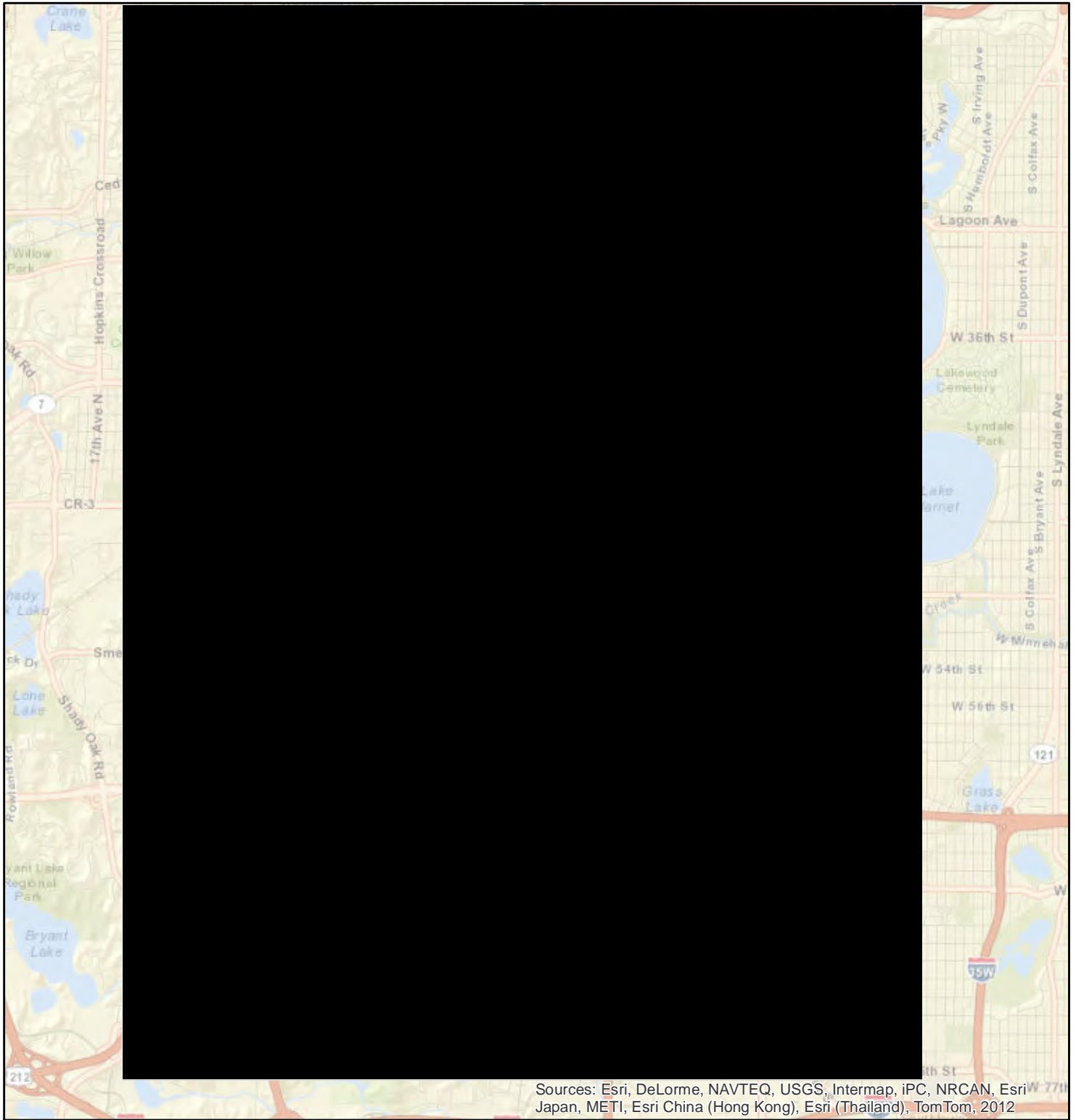
Site Location

Summary of Groundwater Monitoring Results for the
Mt. Simon-Hinckley Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota

Summit
Envirosolutions

Figure 1

File: Fig1_CMSH
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

- PDCJ Well (Groundwater Elevation)
- Groundwater Flow
- Potentiometric Surface Contour Map (CI = 10ft)
- REILLY SITE

Contours derived from interpolated grid of water elevation data collected 9/21/2012 17:00. Interpolated using a linear-log kriging method.

0 5,000 Feet 1 inch = 5,000 feet

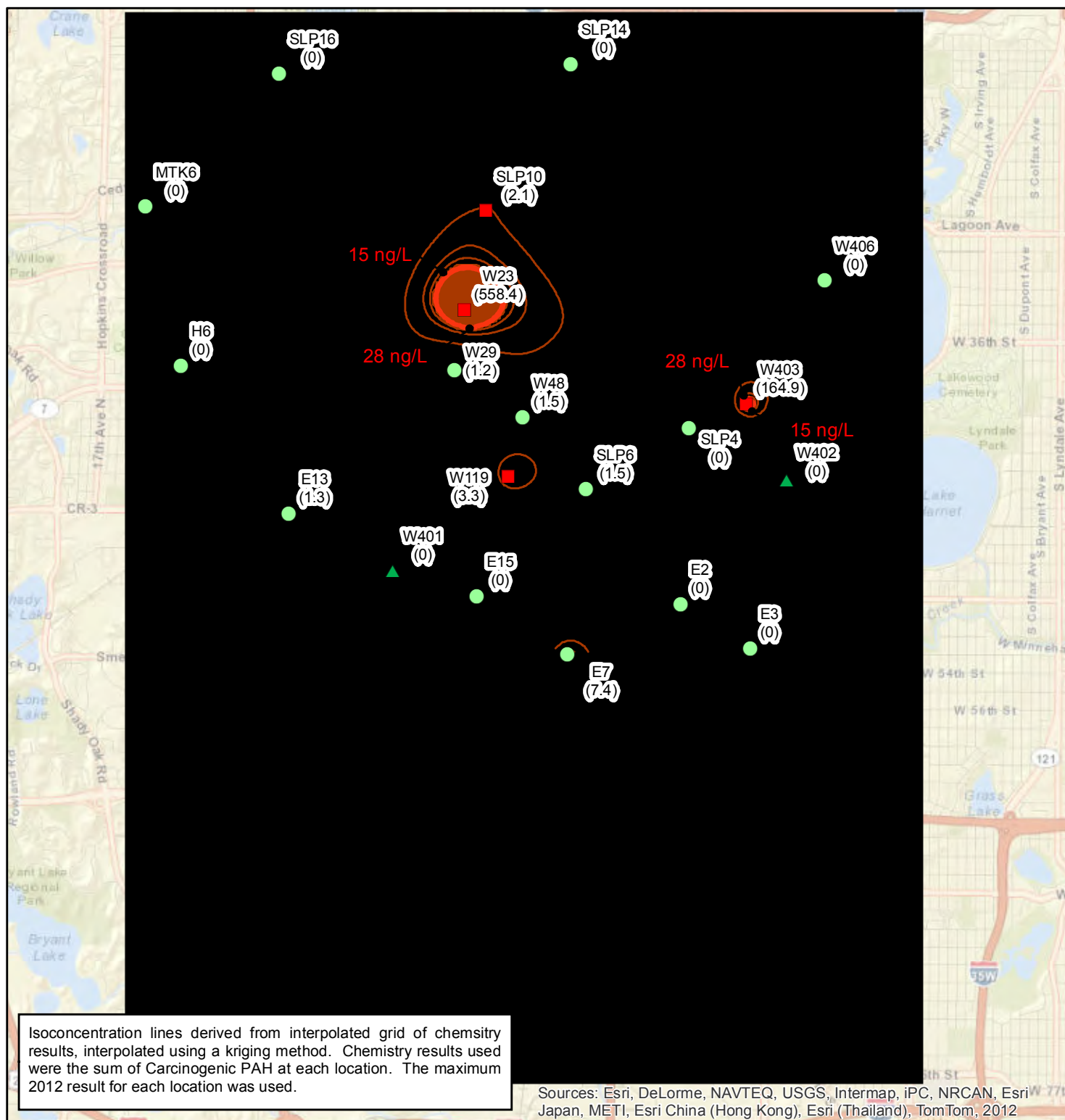


Potentiometric Surface Map Prairie Du Chien - Jordan Aquifer - 2012 2012 Annual Report Reilly Site, City of St. Louis Park, Minnesota

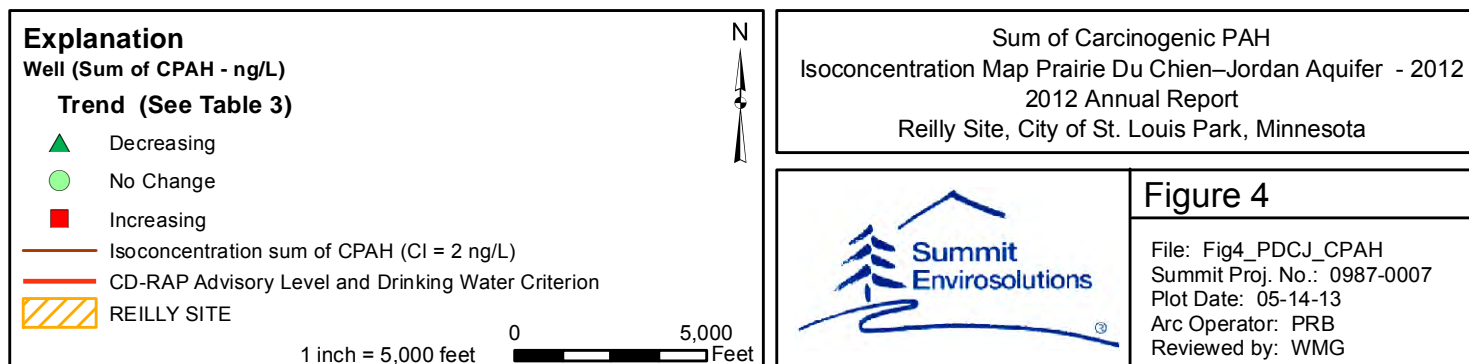


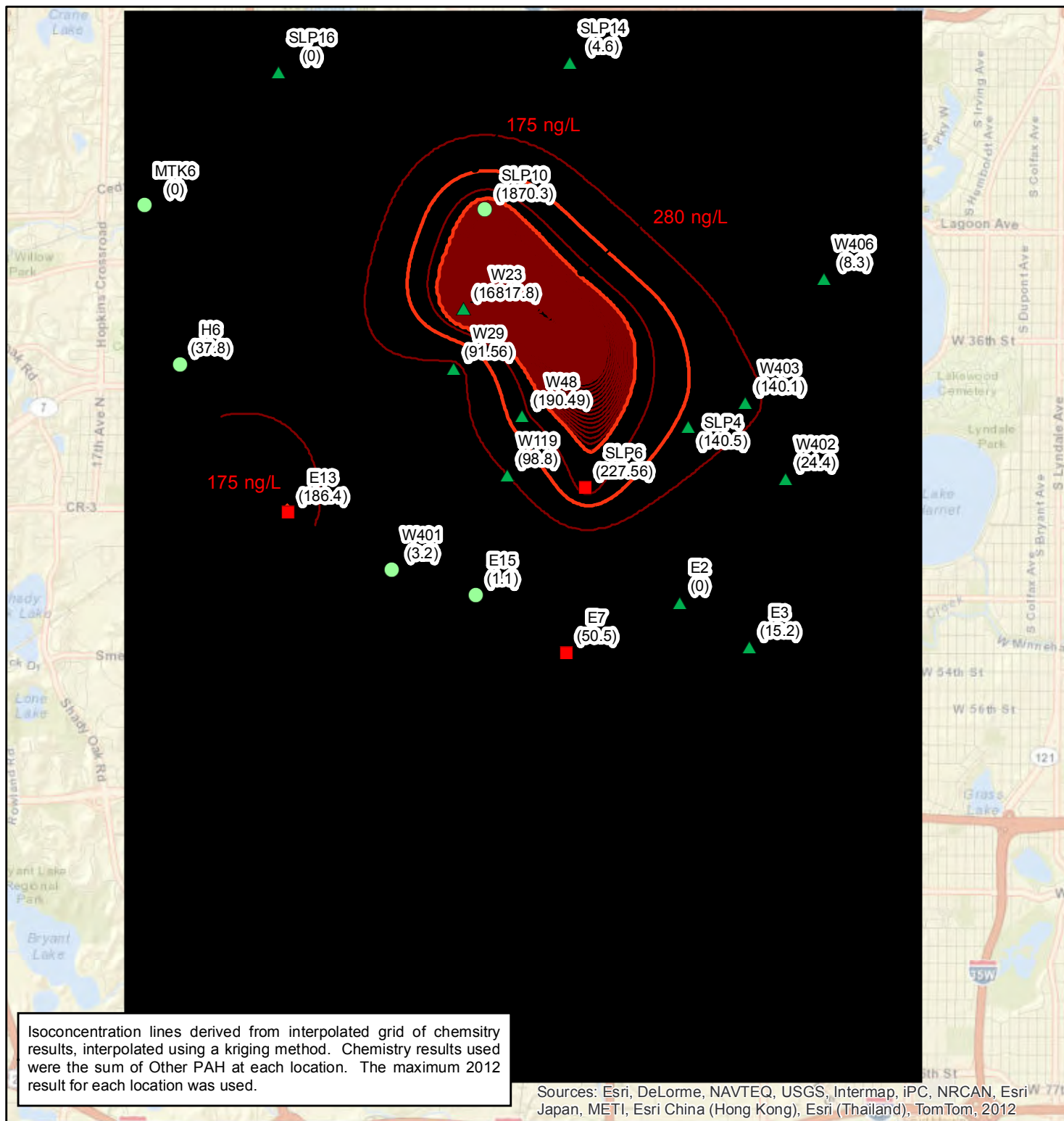
Figure 2

File: Fig2_OPDC_GWE
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.





Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

Well (Sum of OPAH - ng/L)

Trend (See Table 3)

▲ Decreasing

● No Change

■ Increasing

— Isoconcentration sum of OPAH (CI = 100 ng/L)

— CD-RAP Advisory Level and Drinking Water Criterion

REILLY SITE

1 inch = 5,000 feet

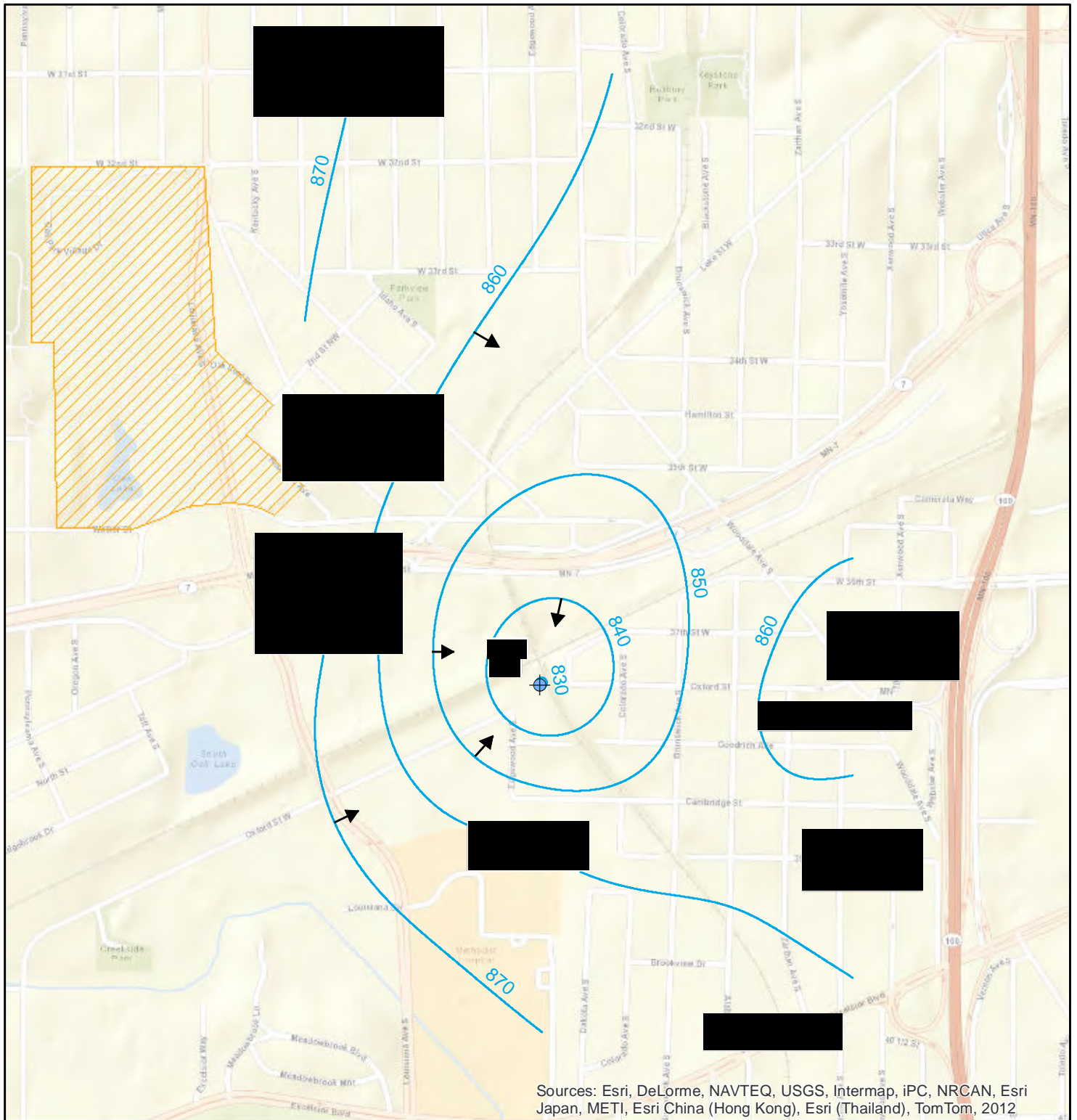
0 5,000 Feet

Sum of Other PAH
Isoconcentration Map Prairie Du Chien-Jordan Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota



Figure 5

File: Fig4_PDCJ_OPAH
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

— Potentiometric Surface Contour Map (CI = 10 ft)

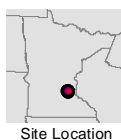
→ Groundwater Flow

REILLY SITE

OSTP Well (Groundwater Elevation)

Contours derived from interpolated grid of water elevation data collected 9/21/2012 17:00. Interpolated using a linear-log kriging method.

0 1,000 Feet 1 inch = 1,000 feet

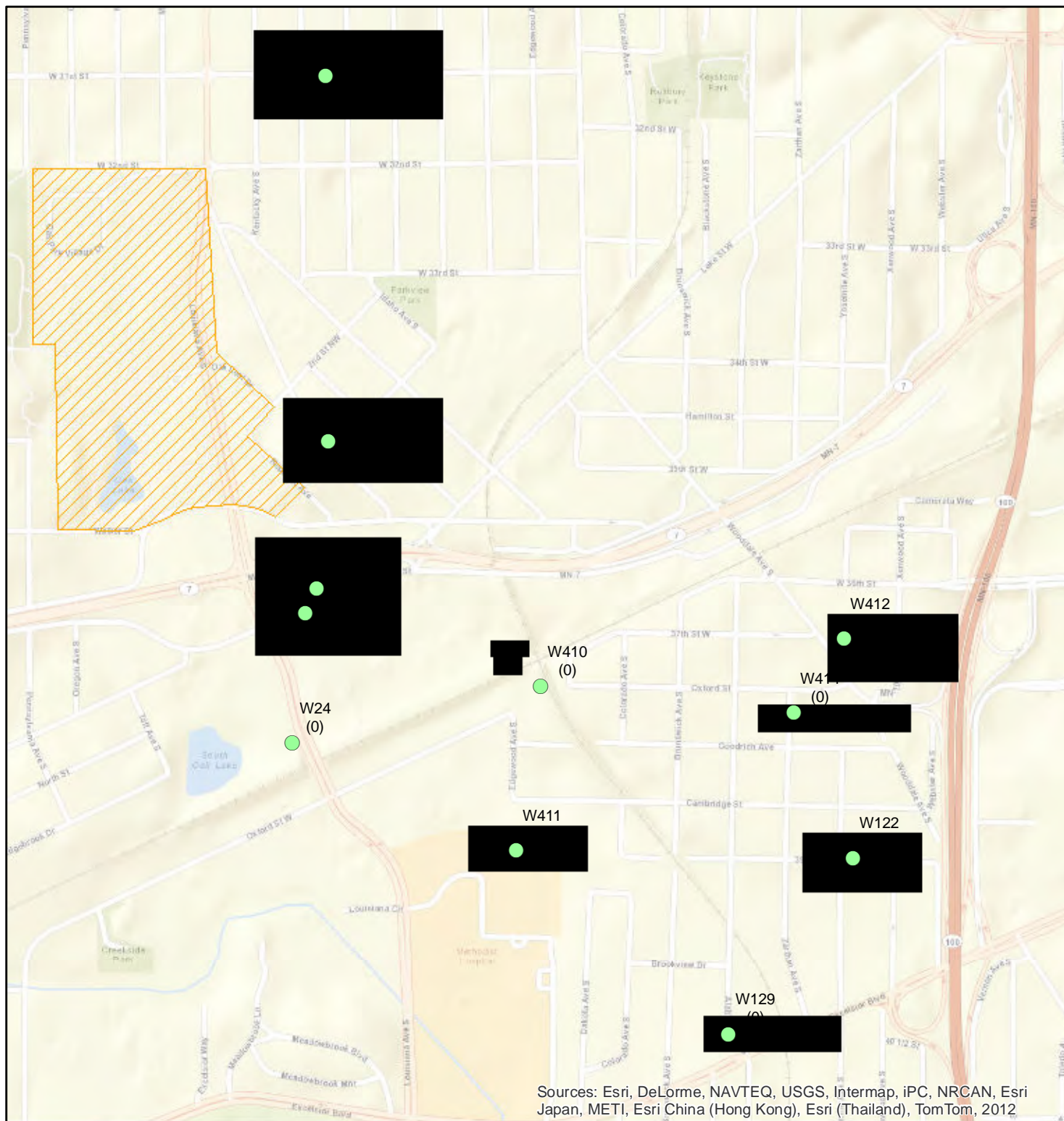


Potentiometric Surface Map St. Peter Aquifer - 2012 2012 Annual Report Reilly Site, City of St. Louis Park, Minnesota



Figure 6

File: Fig6_OSTP_GWE
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

Well (Sum of BaP & DahA - ng/L)

Trend (See Table 3)

- ▲ Decreasing
- No Change
- Increasing
- REILLY SITE

1 inch = 1,000 feet

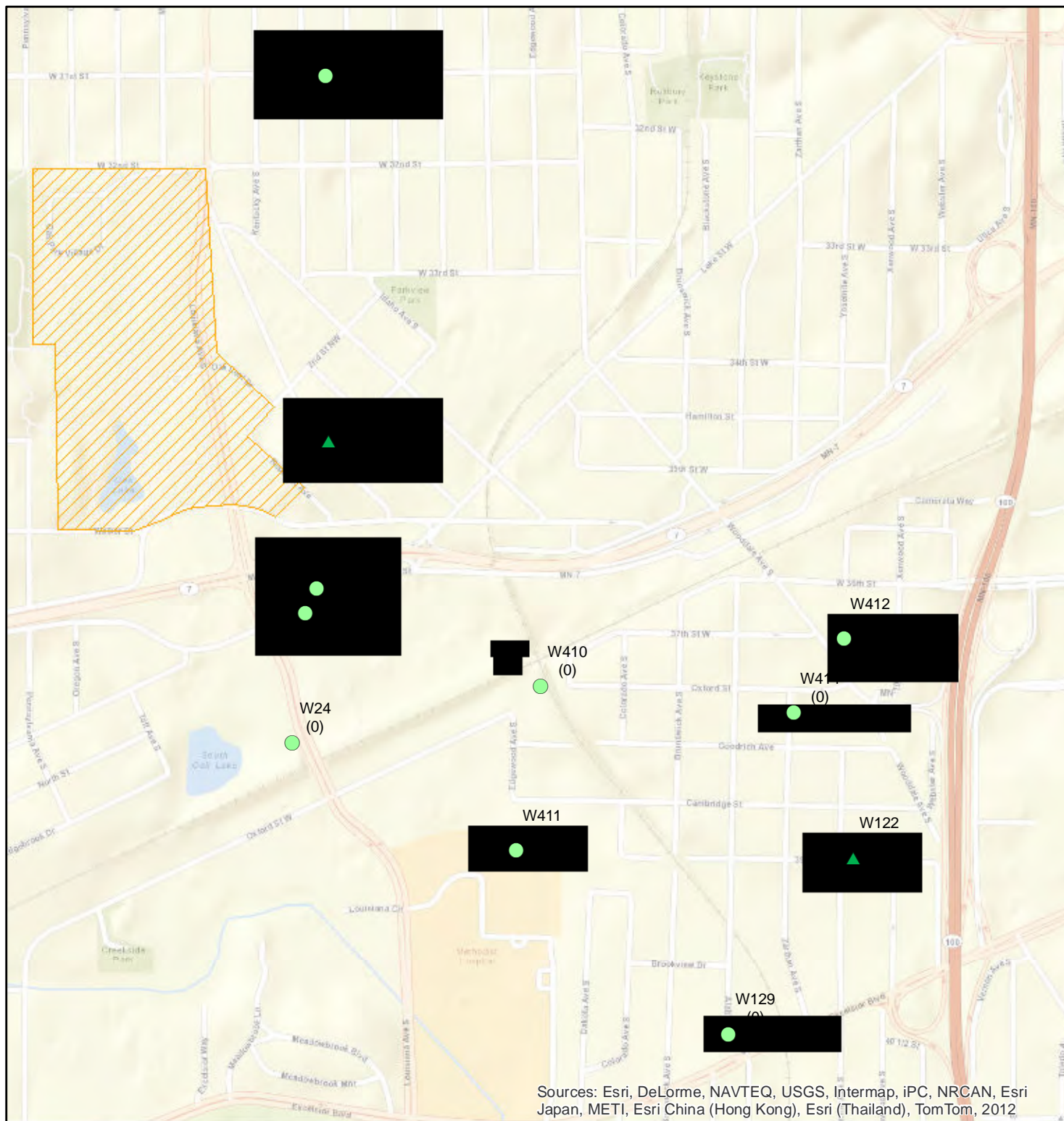
0 1,000 Feet

Sum of Benzo(a)pyrene Plus Dibenzo(a,h)anthracene
Isoconcentration Map St. Peter Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota



Figure 7

File: Fig7_OSTP_BaP_Daha
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

Well (Sum of CPAH - ng/L)

Trend (See Table 3)

- ▲ Decreasing
- No Change
- Increasing
- ▨ REILLY SITE

1 inch = 1,000 feet

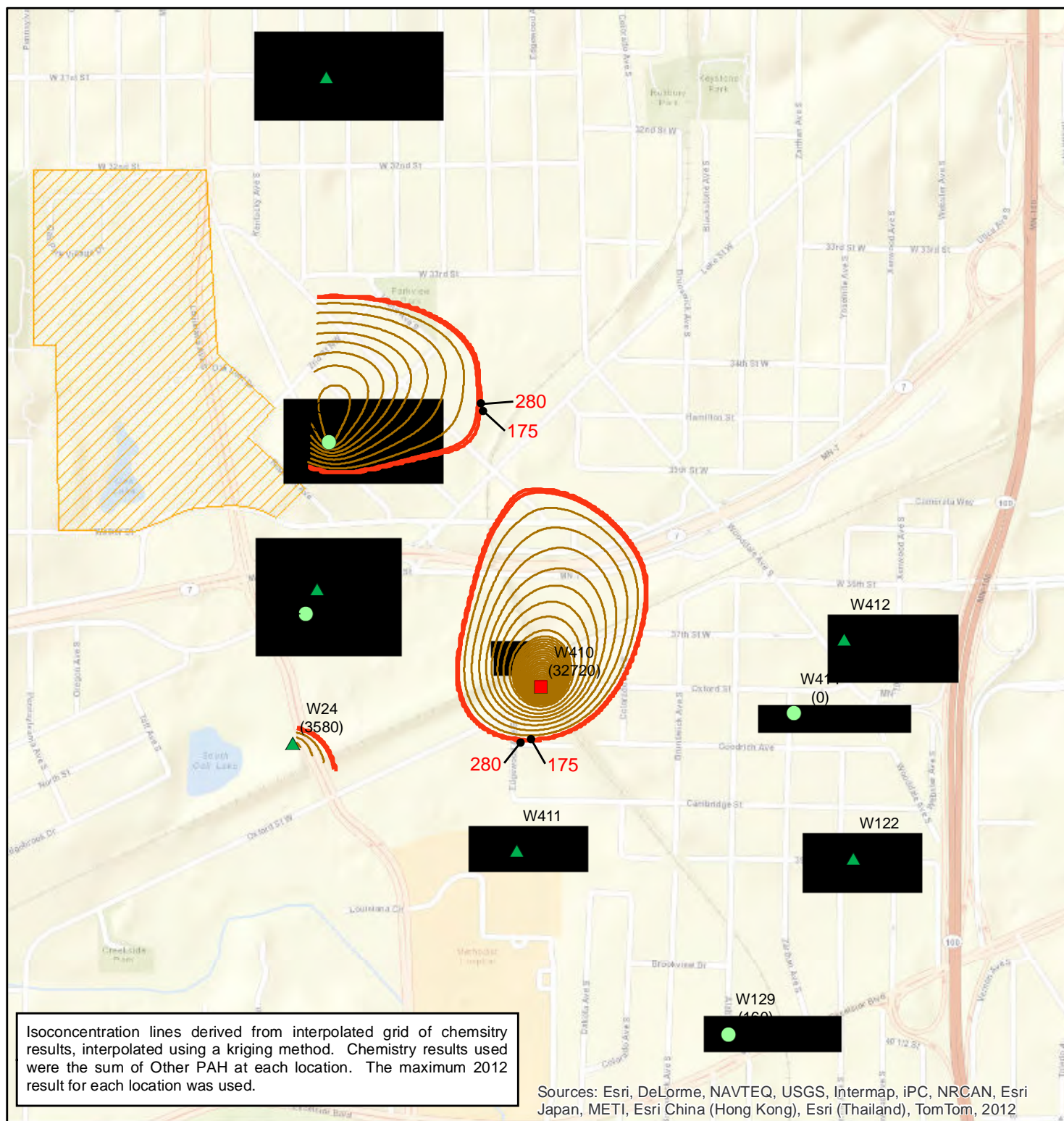
0 1,000 Feet

Sum of Carcinogenic PAH
Isoconcentration Map St. Peter Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota

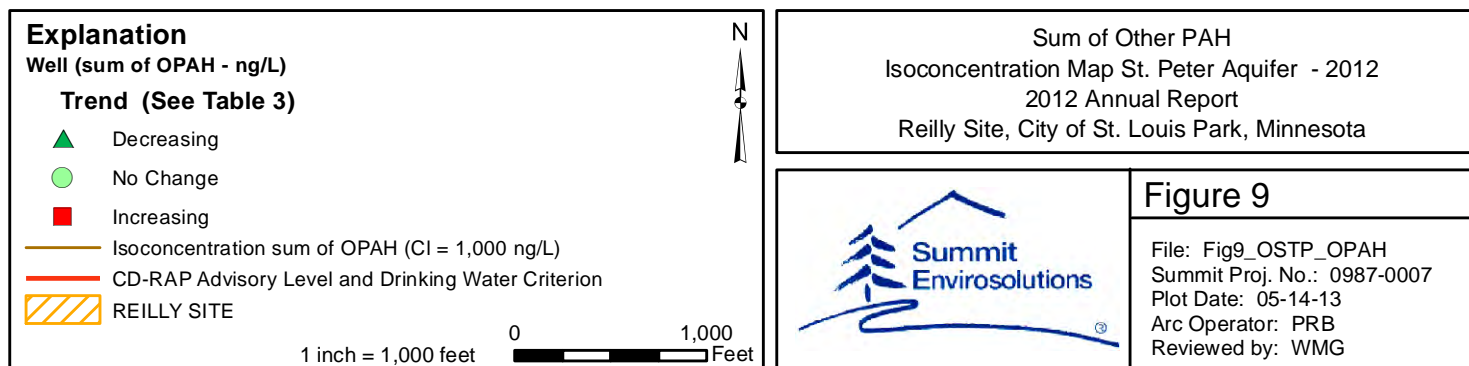


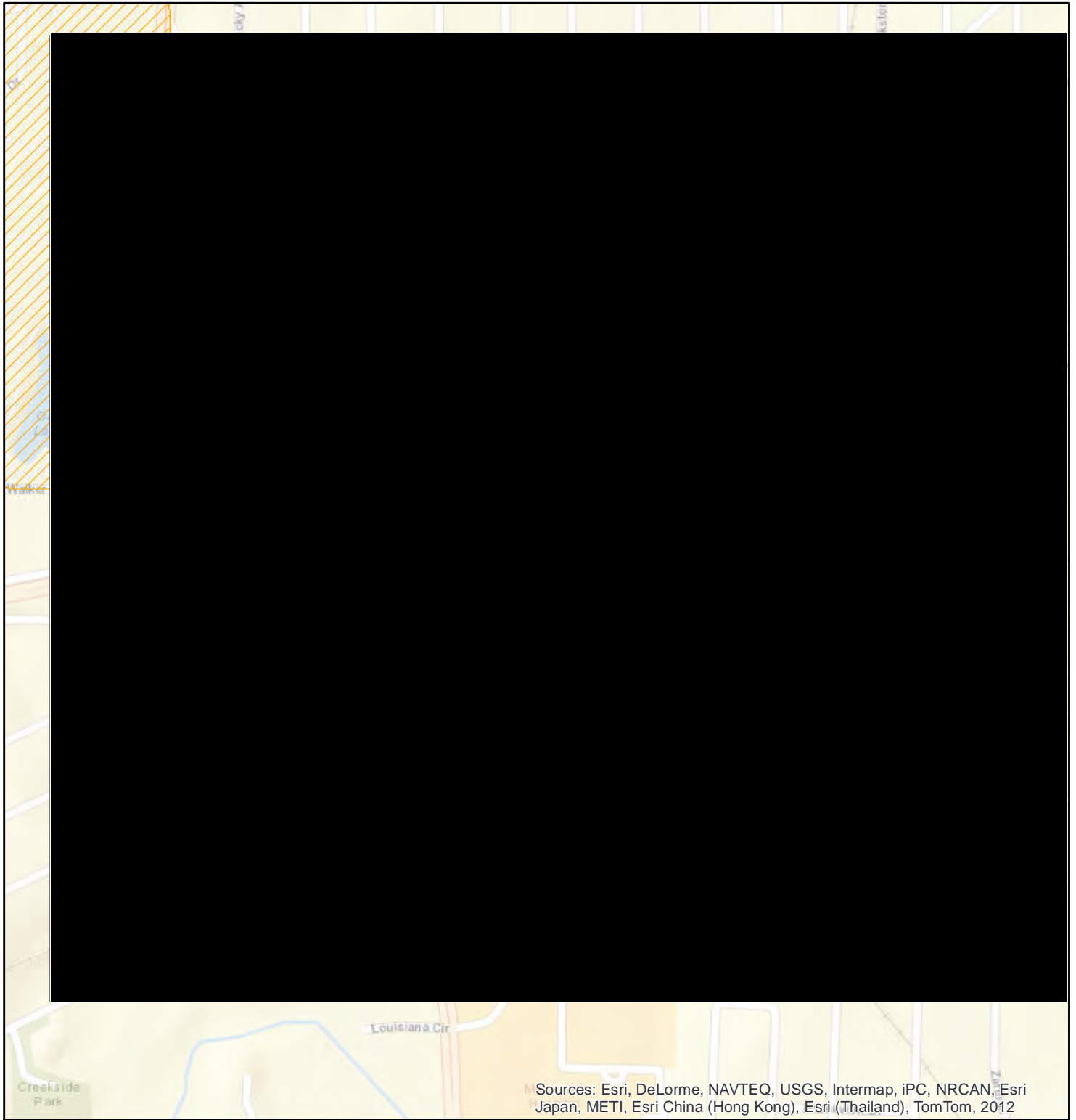
Figure 8

File: Fig8_OSTP_CPAH
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.





Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

— Potentiometric Surface Contour Map (CI = 10 ft)

→ Groundwater Flow

REILLY SITE

OPVL Well (Groundwater Elevation)

Contours derived from interpolated grid of water elevation data collected 9/21/2012 17:00. Interpolated using a linear-log kriging method.

0 700 Feet 1 inch = 700 feet



Site Location

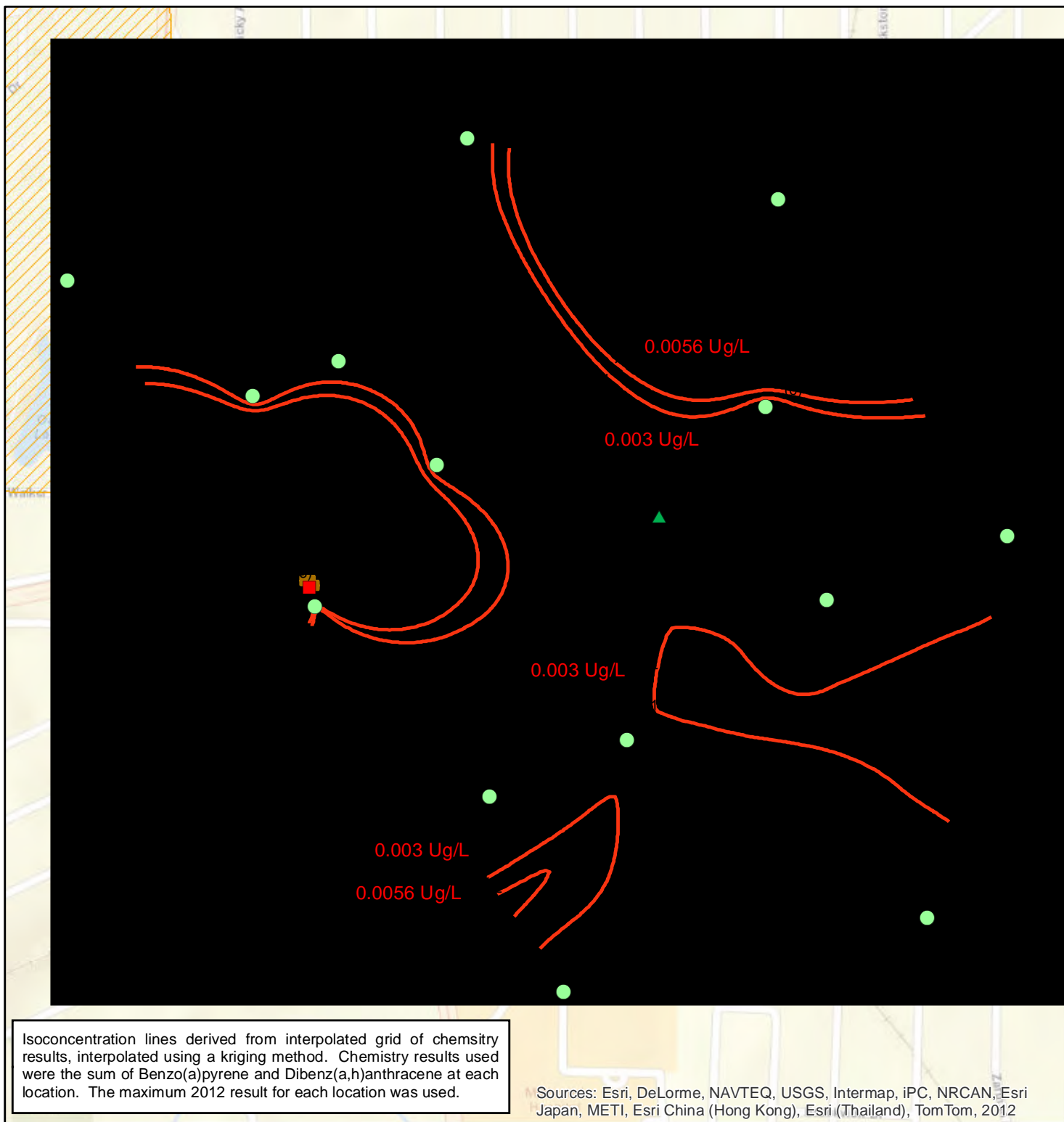


Potentiometric Surface Map
Platteville Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota

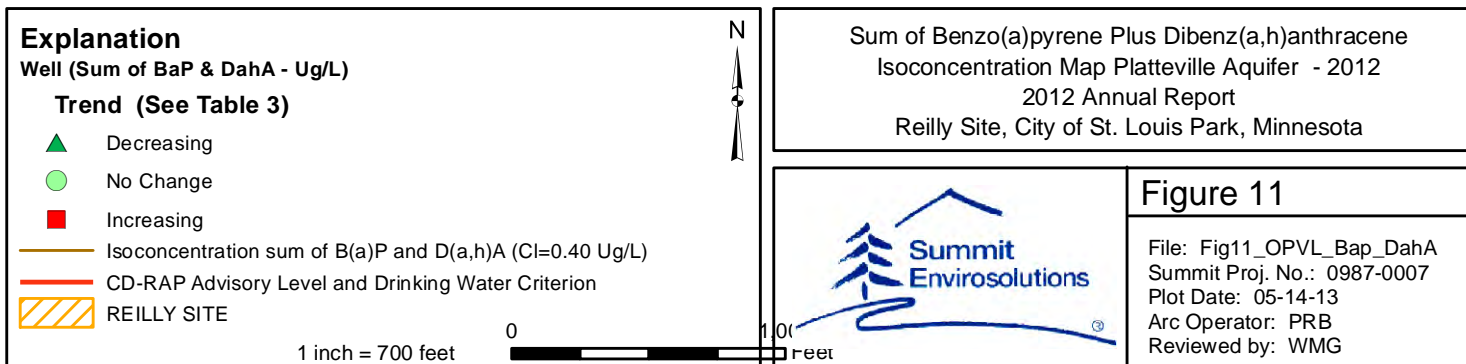


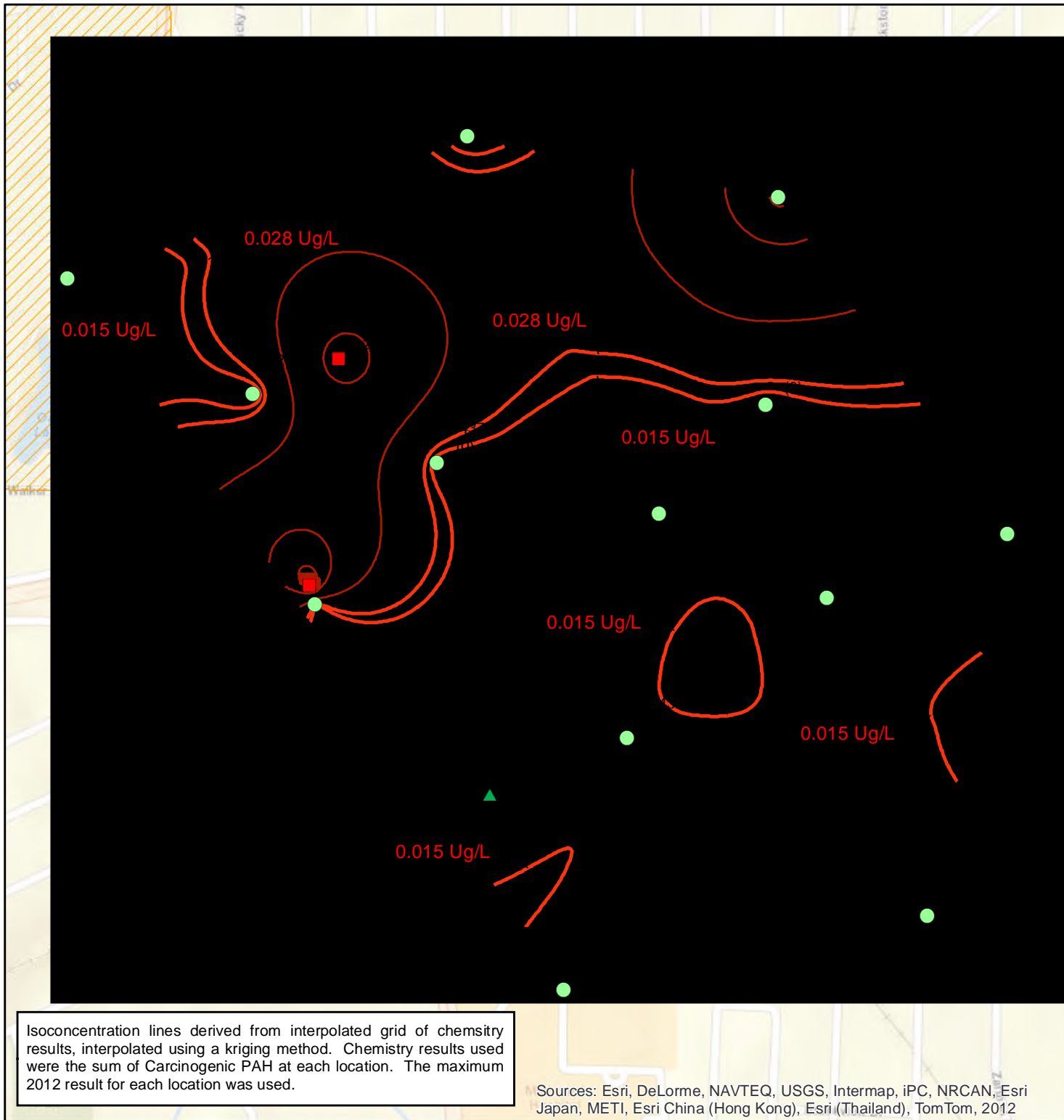
Figure 10

File: Fig10_OPVL_GWE
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG

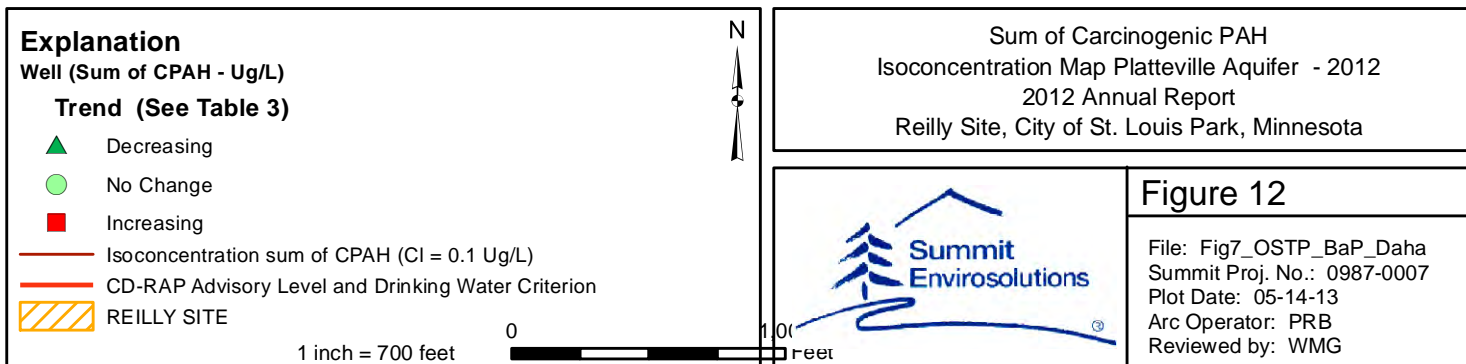


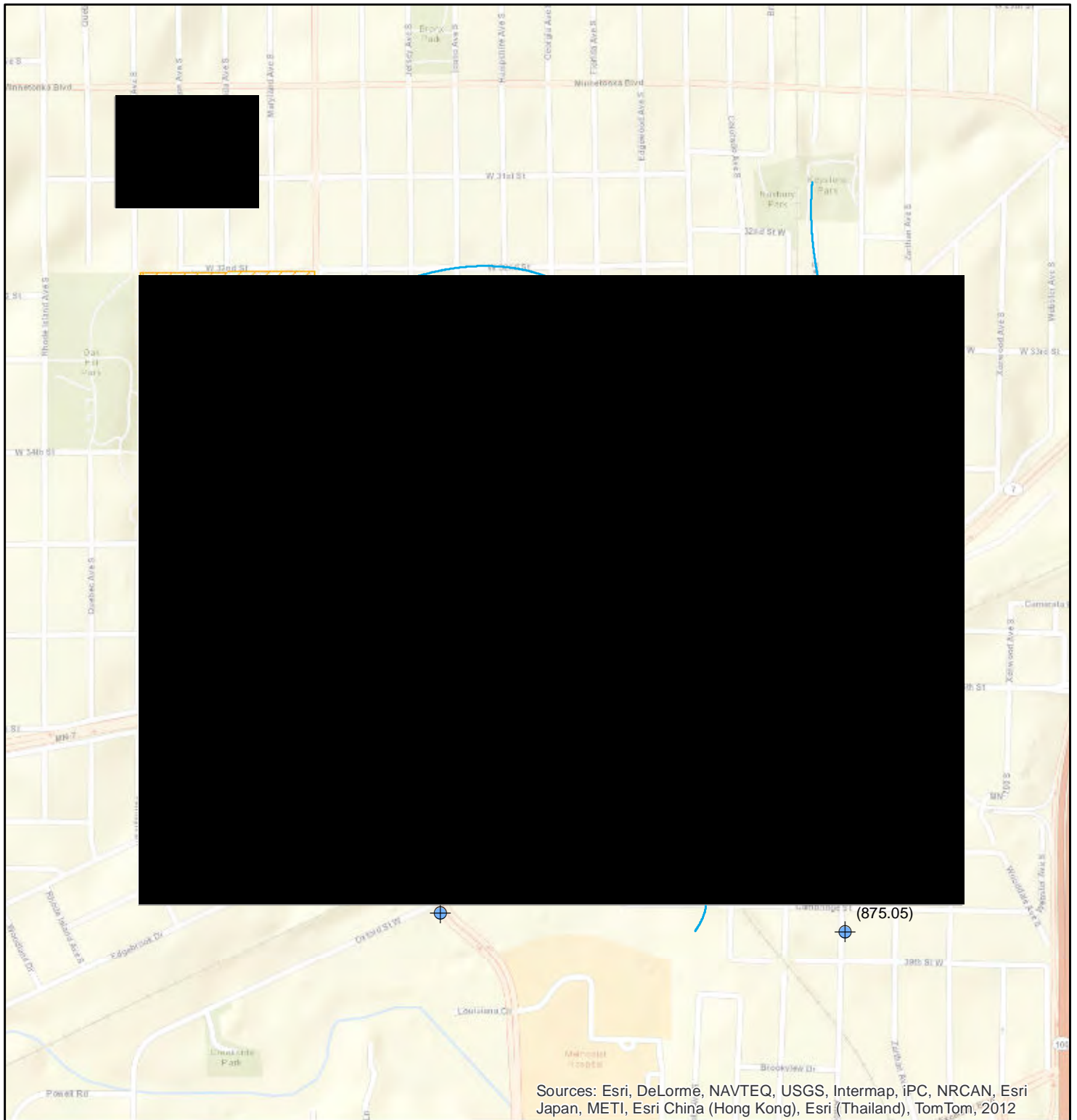
Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.









Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.





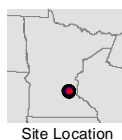
Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

-  Potentiometric Surface Contour Map (CI = 10 ft)
-  Groundwater Flow
-  REILLY SITE
-  Drift Well (Groundwater Elevation)

Contours derived from interpolated grid of water elevation data collected 9/21/2012 17:00. Interpolated using a linear-log kriging method.

0 1,000 Feet 1 inch = 1,000 feet

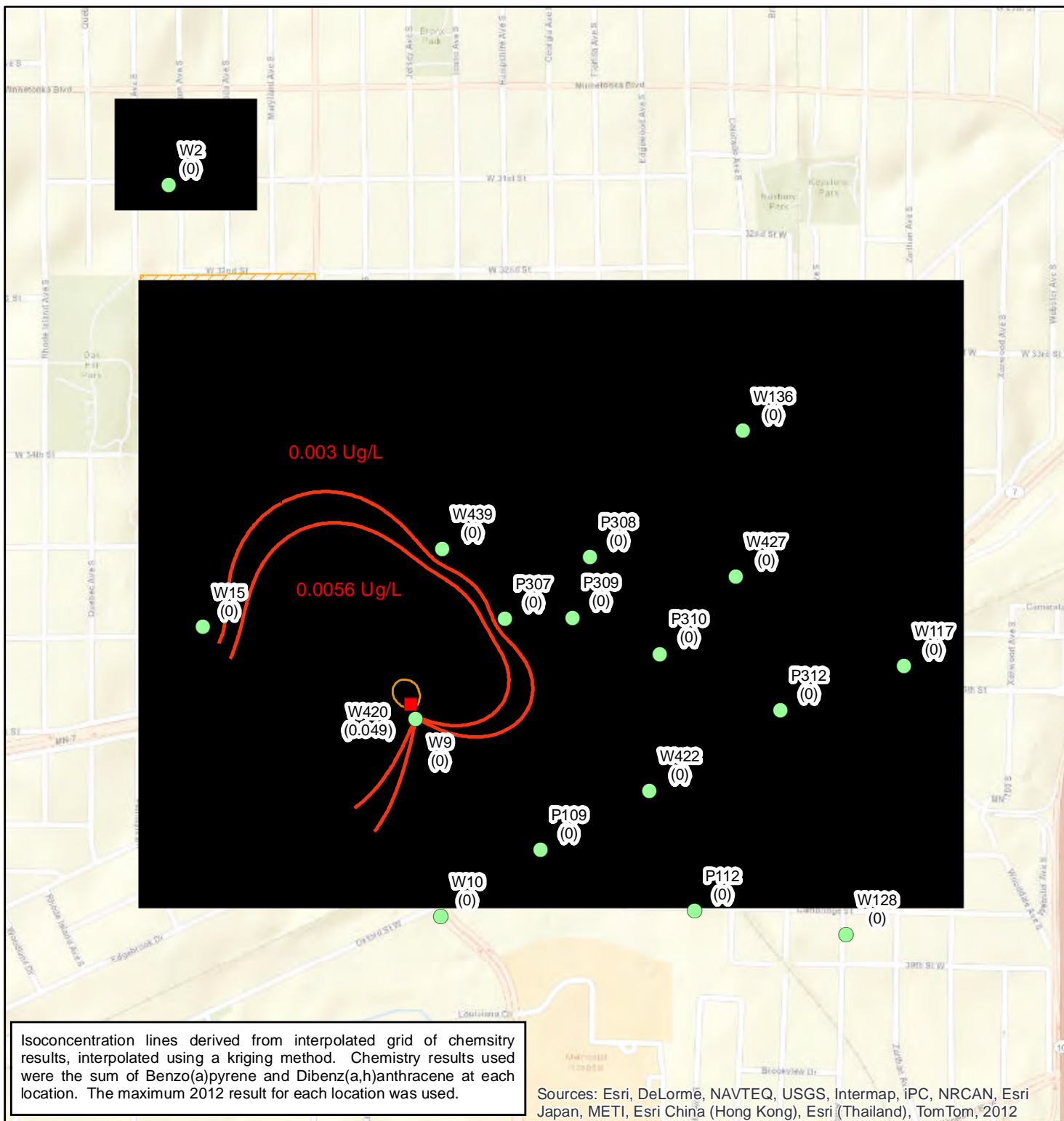


Potentiometric Surface Map Drift Aquifer - 2012 2012 Annual Report Reilly Site, City of St. Louis Park, Minnesota



Figure 14

File: Fig14_DRIFT_GWE
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

Well (Sum of BaP & DahA - Ug/L)

Trend (See Table 3)

▲ Decreasing

● No Change

■ Increasing

— Isoconcentration sum of B(a)P and D(a,h)A (CI = 0.04 Ug/L)

— CD-RAP Advisory Level and Drinking Water Criterion

REILLY SITE



1 inch = 1,000 feet

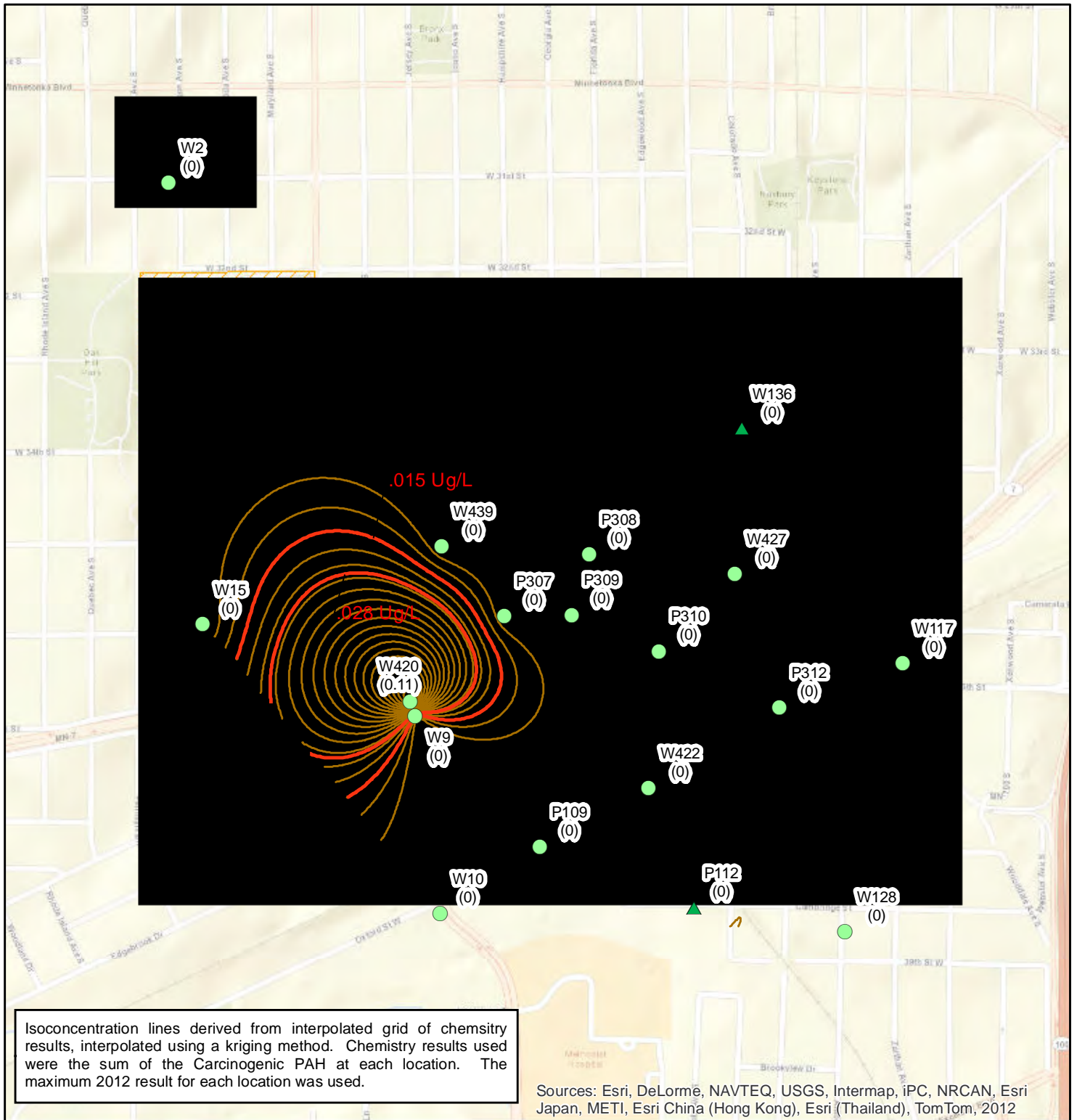
0 1,000 Feet

Sum of Benzo(a)pyrene Plus Dibenz(a,h)anthracene
Isoconcentration Map Drift Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota



Figure 15

File: Fig15_DRIFT_BaP_DahA
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.

Explanation

Well (Sum of CPAH - UG/L)

Trend (See Table 3)

▲ Decreasing

● No Change

■ Increasing

— Isoconcentration sum of CPAH (CI = 0.005 UG/L)

— CD-RAP Advisory Level and Drinking Water Criterion

▨ REILLY SITE

1 inch = 1,000 feet

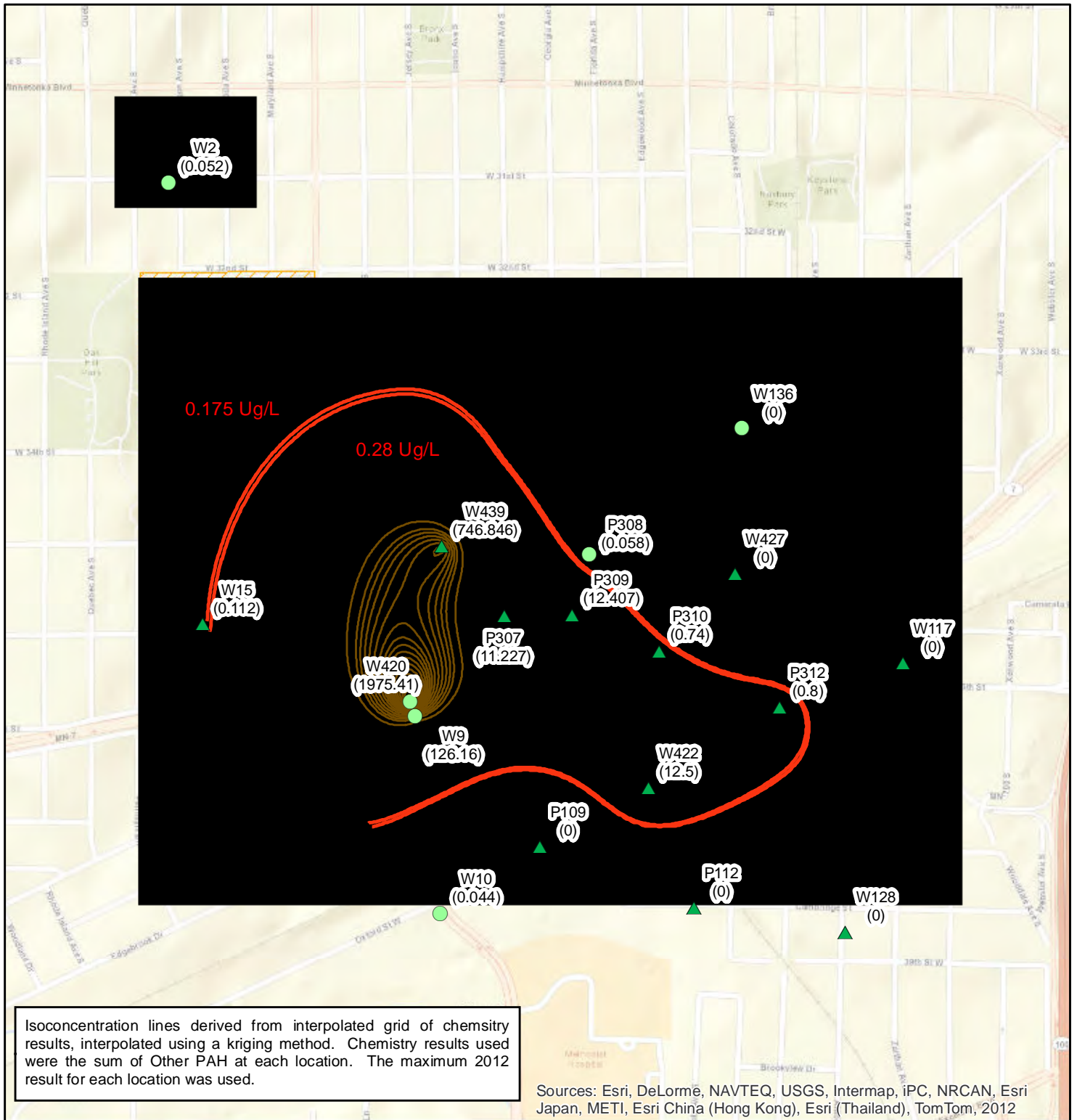


Sum of Carcinogenic PAH
Isoconcentration Map Drift Aquifer - 2012
2012 Annual Report
Reilly Site, City of St. Louis Park, Minnesota

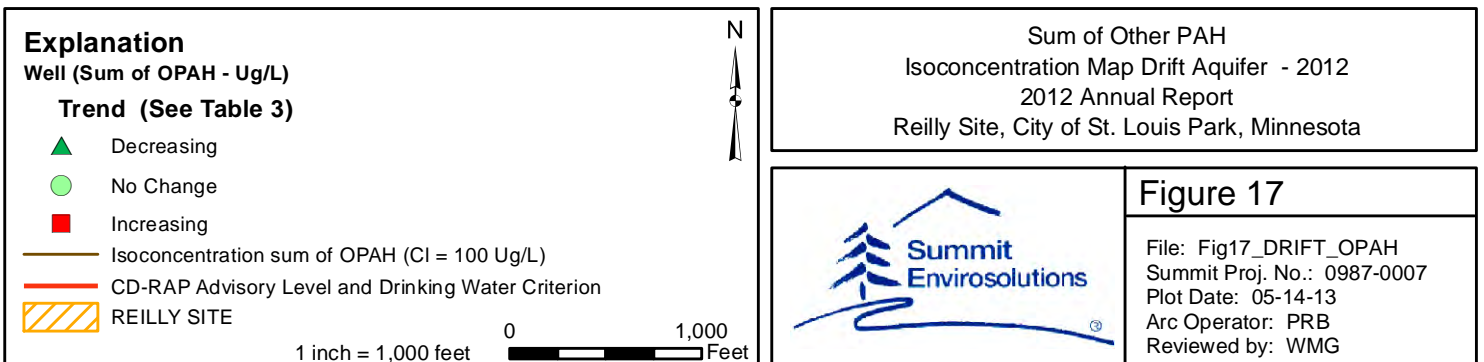


Figure 16

File: Fig16_DRIFT_CPAH
Summit Proj. No.: 0987-0007
Plot Date: 05-14-13
Arc Operator: PRB
Reviewed by: WMG



Map adapted from U.S. and Canada Detailed Streets (2008), Tele Atlas North America, Inc., ESRI.



Appendix A Statistical Evaluation of PAH Data

William Gregg

From: Kerr, Michelle [kerr.michelle@epa.gov]
Sent: Wednesday, May 01, 2013 12:39 PM
To: William Gregg
Cc: Scott Anderson; Scheer, Dave (MPCA); Fellows, Nile (MPCA)
Subject: Statistical tool for trends [Reilly Tar]

Bill,

Regarding the City's proposal to use ProUCL for statistical analysis of groundwater trends at the Reilly Tar (Minnesota) site, I consulted with our Geologist Dave Wilson. He believes that the Pro UCL could be appropriate if the City uses the included Theil-Sen procedure. He says this procedure is a non-parametric test for determining significant slope, but also provides the rate of change. (Is it a strong trend or weak trend?)
The Theil-Sen procedure is also robust for outliers, missing data and non-detects.

Michelle Kerr
U.S. EPA Region 5 Superfund Division
T: 312.886.8961

Summary of Statistical PAH Trends

Mt. Simon					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
SLP 11	Drinking Supply	24	No Change	No Change	Decreasing
SLP 12	Drinking Supply	25	No Change	No Change	Decreasing
SLP 13	Drinking Supply	23	No Change	No Change	Decreasing

BaP DahA (sum) - SLP 11

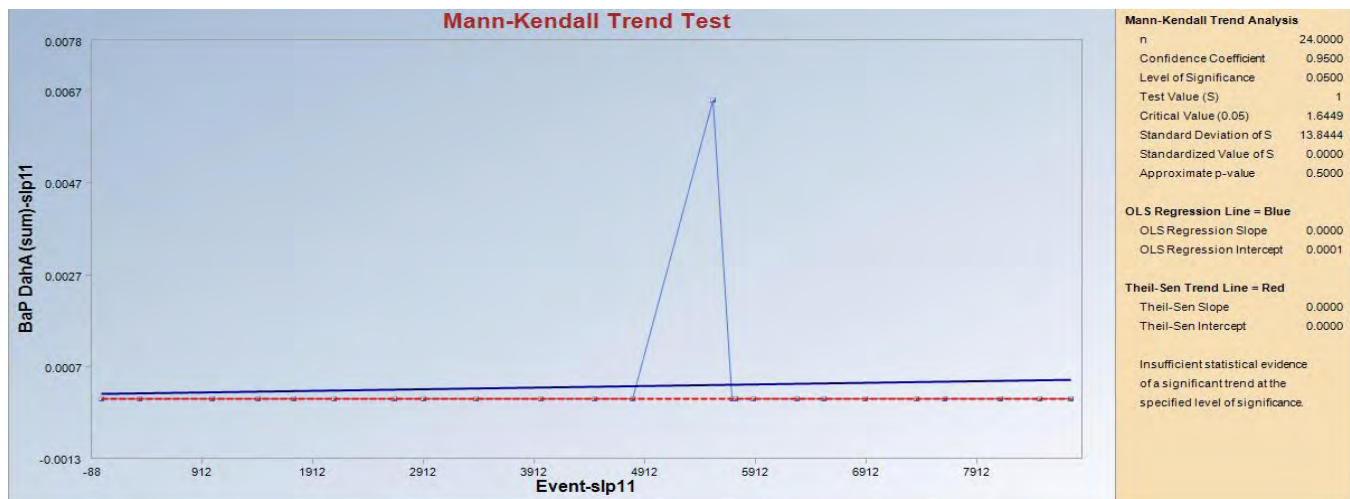
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0.0065
Mean	2.71E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0013268
SEM	2.71E-04

Mann-Kendall Test

Test Value (S)	1
Critical Value (0.05)	1.6448536
Standard Deviation of S	13.844373
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 11

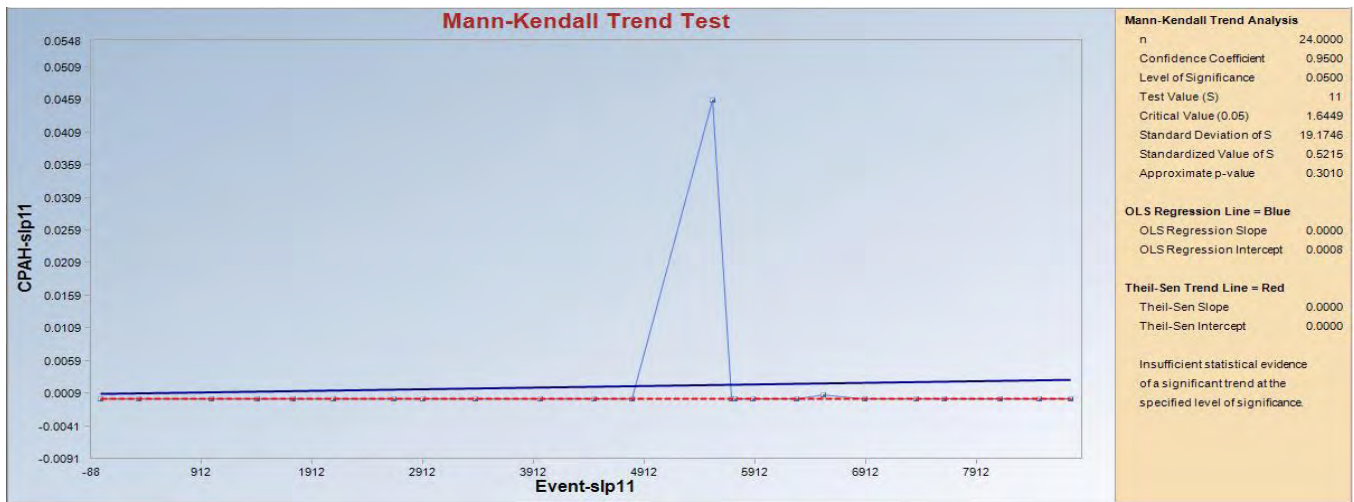
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0.0457
Mean	0.0019258
Geometric Mean	0
Median	0
Standard Deviation	0.0093245
SEM	0.0019033

Mann-Kendall Test

Test Value (S)	11
Critical Value (0.05)	1.6448536
Standard Deviation of S	19.174636
Standardized Value of S	0.5215223
Approximate p-value	0.3010015

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - SLP 11

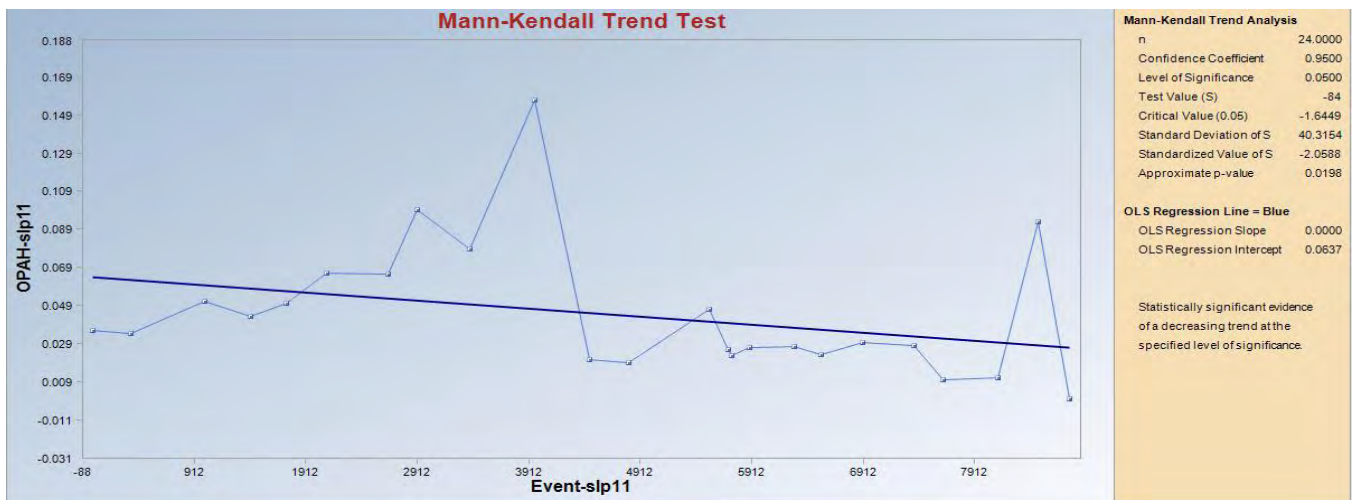
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0.1563
Mean	0.0441471
Geometric Mean	0
Median	0.03173
Standard Deviation	0.0348873
SEM	0.0071213

Mann-Kendall Test

Test Value (S)	-84
Critical Value (0.05)	-1.644854
Standard Deviation of S	40.315423
Standardized Value of S	-2.058765
Approximate p-value	0.0197584

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - SLP 12

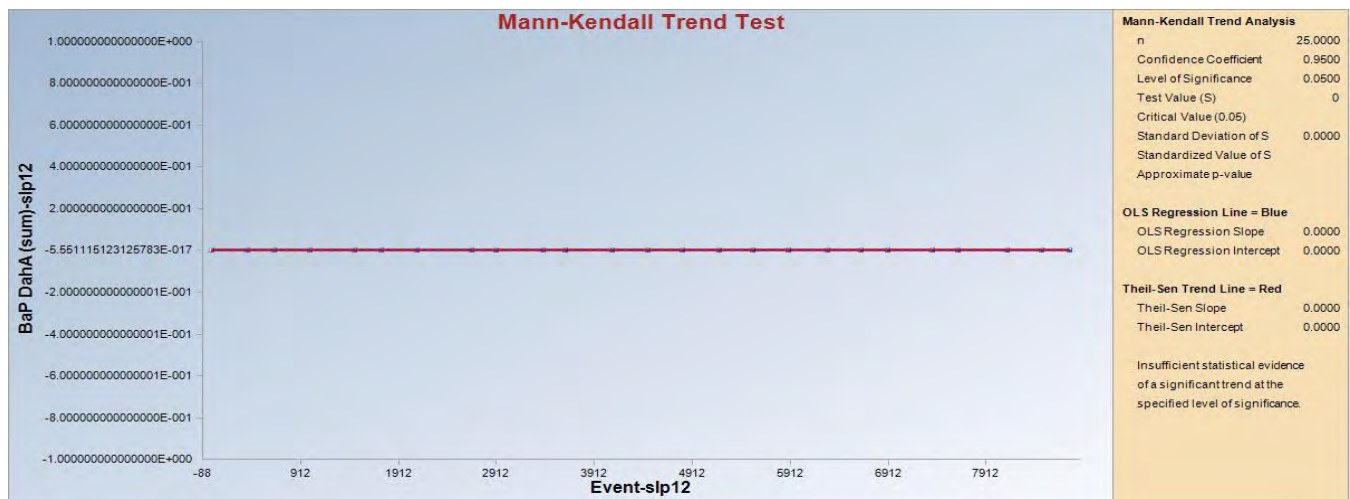
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 12

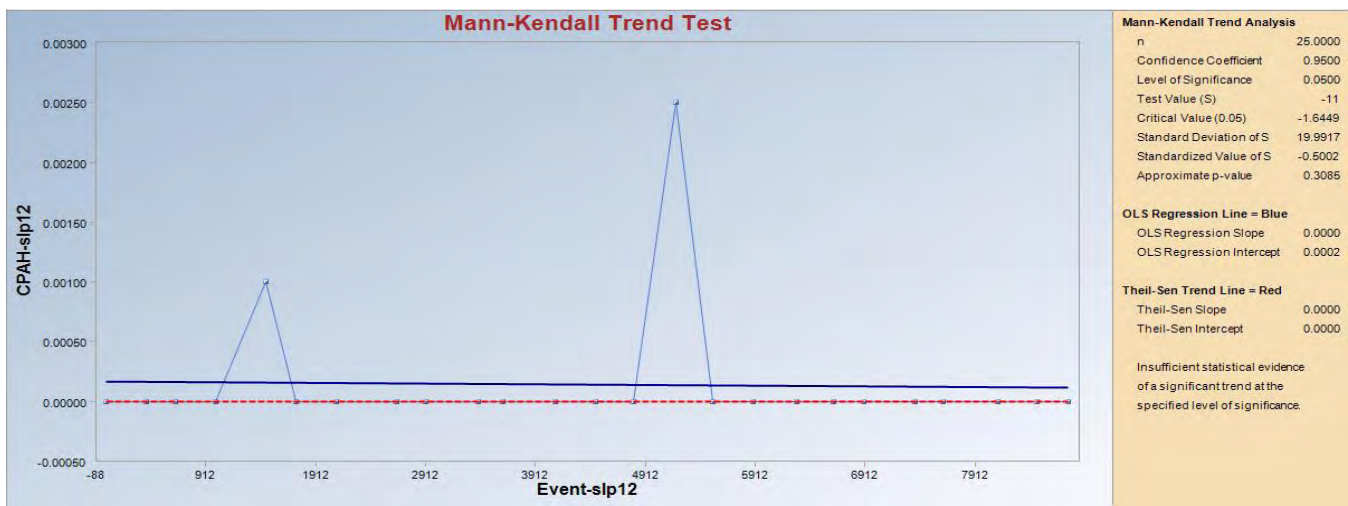
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0025
Mean	1.40E-04
Geometric Mean	0
Median	0
Standard Deviation	5.31E-04
SEM	1.06E-04

Mann-Kendall Test

Test Value (S)	-11
Critical Value (0.05)	-1.644854
Standard Deviation of S	19.991665
Standardized Value of S	-0.500208
Approximate p-value	0.3084641

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (SUM) - SLP 12

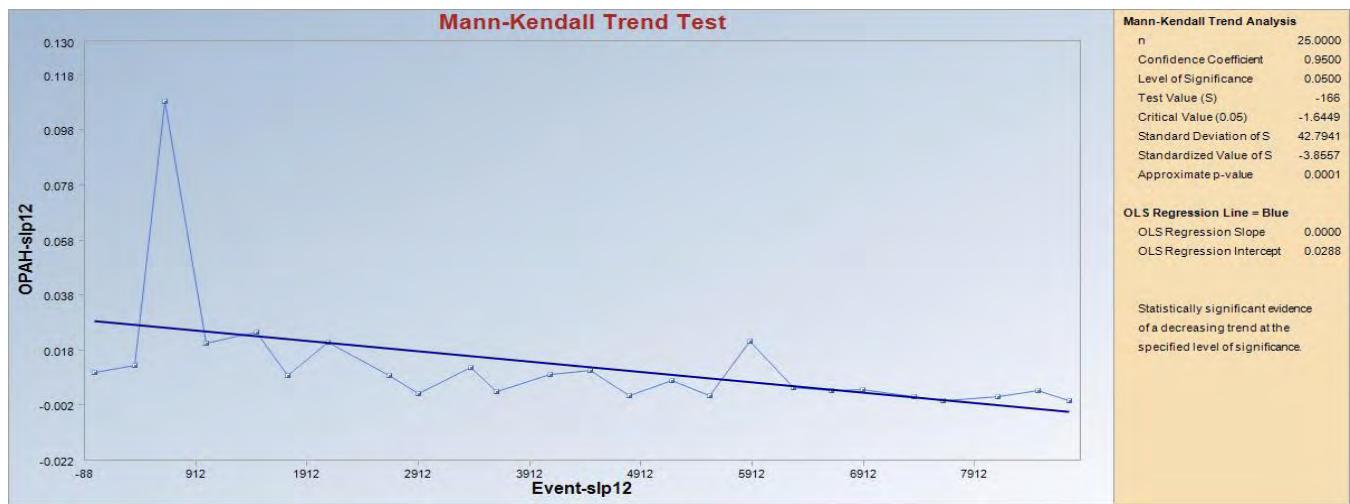
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.1086
Mean	0.0122144
Geometric Mean	0
Median	0.0073
Standard Deviation	0.0213561
SEM	0.0042712

Mann-Kendall Test

Test Value (S)	-166
Critical Value (0.05)	-1.644854
Standard Deviation of S	42.794081
Standardized Value of S	-3.855673
Approximate p-value	5.77E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - SLP13

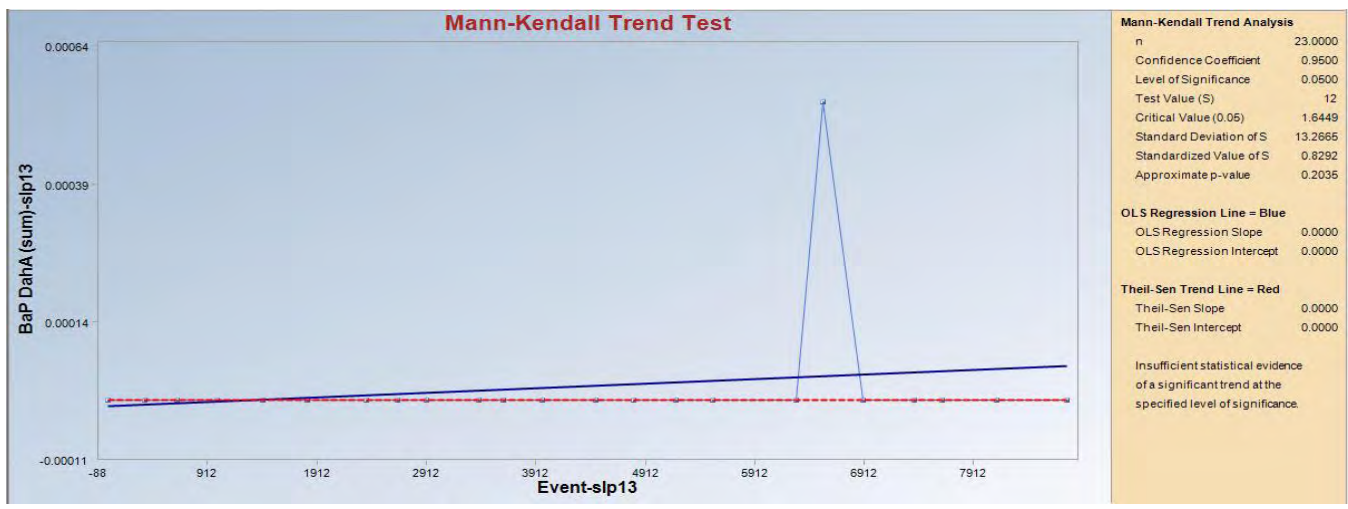
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	5.40E-04
Mean	2.35E-05
Geometric Mean	0
Median	0
Standard Deviation	1.13E-04
SEM	2.35E-05

Mann-Kendall Test

Test Value (S)	12
Critical Value (0.05)	1.6448536
Standard Deviation of S	13.266499
Standardized Value of S	0.8291562
Approximate p-value	0.203508

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 13

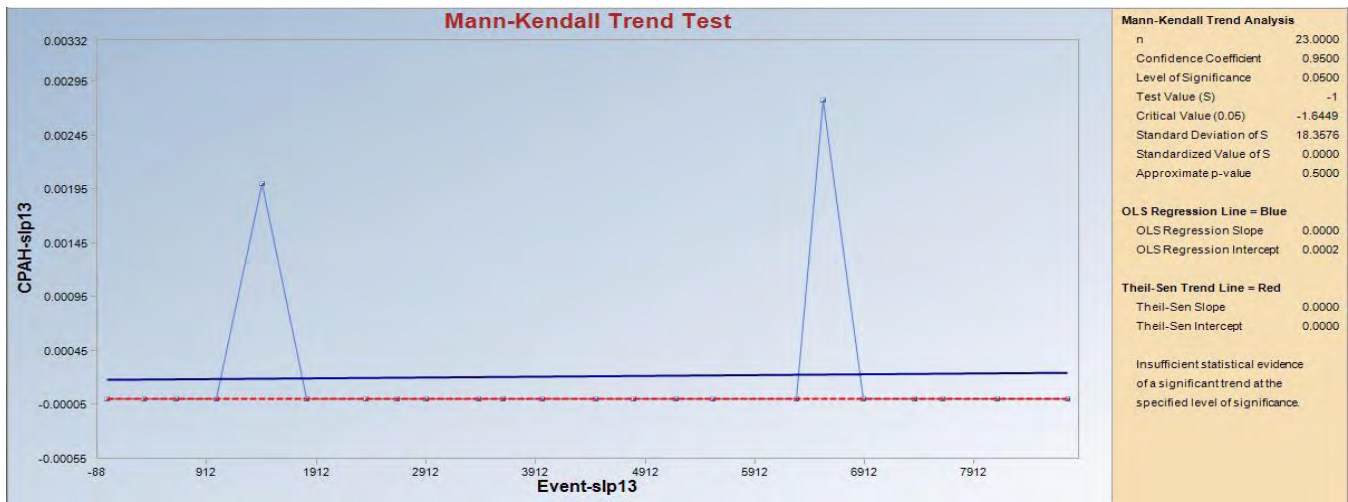
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.00277
Mean	2.07E-04
Geometric Mean	0
Median	0
Standard Deviation	6.97E-04
SEM	1.45E-04

Mann-Kendall Test

Test Value (S)	-1
Critical Value (0.05)	-1.644854
Standard Deviation of S	18.35756
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - SLP 13

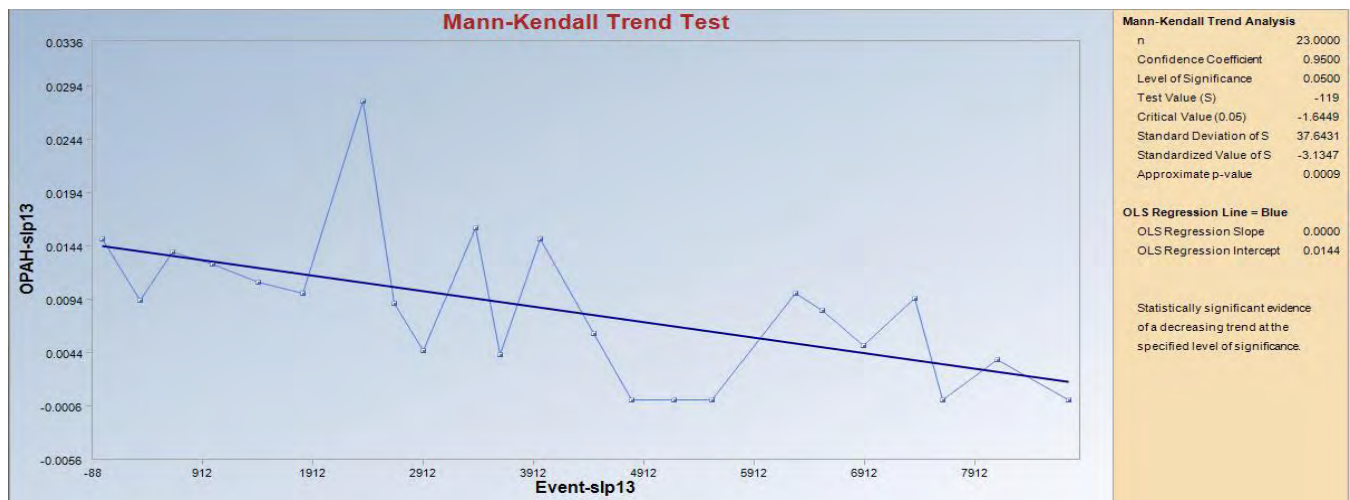
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.028
Mean	0.0083404
Geometric Mean	0
Median	0.009
Standard Deviation	0.0068022
SEM	0.0014184

Mann-Kendall Test

Test Value (S)	-119
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.64306
Standardized Value of S	-3.134708
Approximate p-value	8.60E-04

Statistically significant evidence of a decreasing trend at the specified level of significance.



Summary of Statistical PAH Trends

Wonewoc					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
Well 105	Monitoring	32	Increasing	Increasing	No Change

BaP DahA (sum) - W105

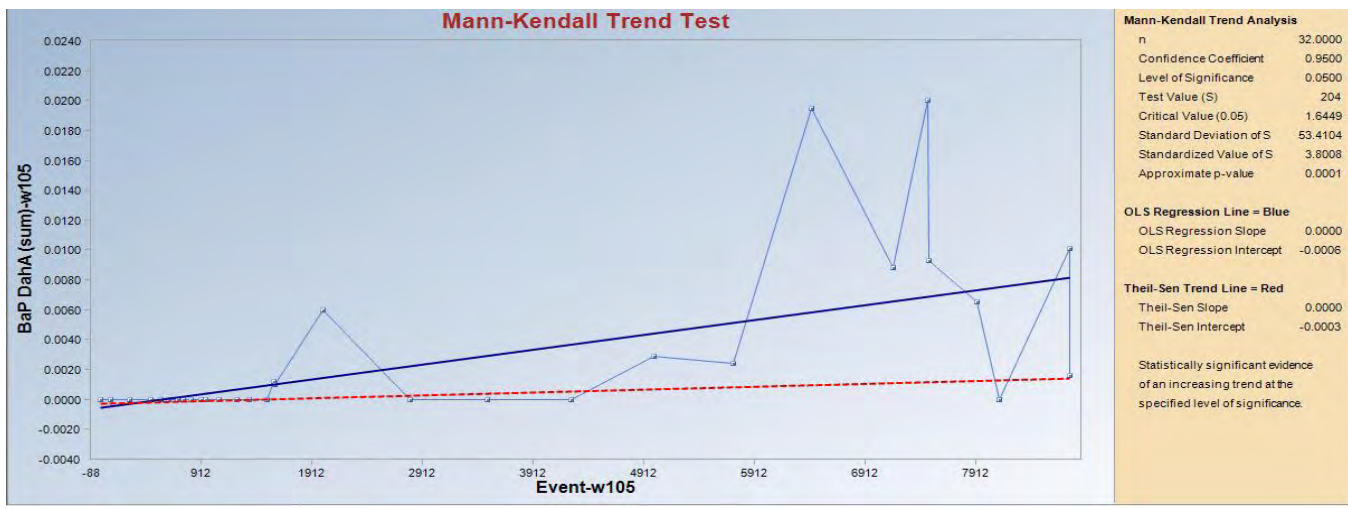
General Statistics

Number of Events	32
Number of Values	32
Minimum	0
Maximum	0.02
Mean	0.0027906
Geometric Mean	0
Median	0
Standard Deviation	0.0053714
SEM	9.50E-04

Mann-Kendall Test

Test Value (S)	204
Critical Value (0.05)	1.6448536
Standard Deviation of S	53.410361
Standardized Value of S	3.8007607
Approximate p-value	7.21E-05

Statistically significant evidence of an increasing trend at the specified level of significance.



CPAH (sum) - W105

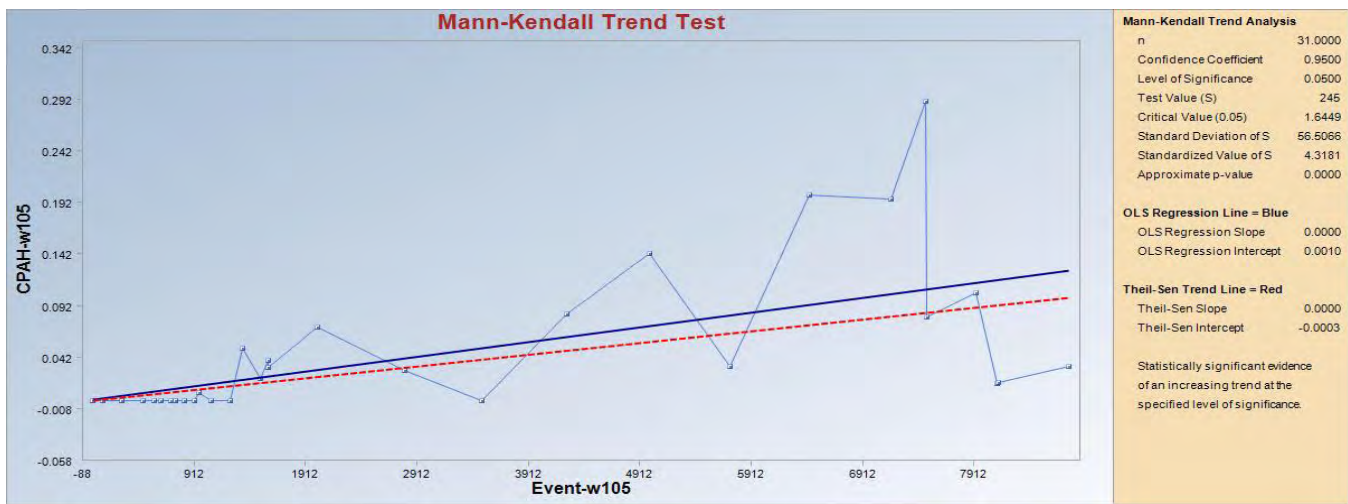
General Statistics

Number of Events	31
Number of Values	31
Minimum	0
Maximum	0.2898
Mean	0.0466161
Geometric Mean	0
Median	0.0177
Standard Deviation	0.0714754
SEM	0.0128374

Mann-Kendall Test

Test Value (S)	245
Critical Value (0.05)	1.6448536
Standard Deviation of S	56.506637
Standardized Value of S	4.3180768
Approximate p-value	7.87E-06

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W105

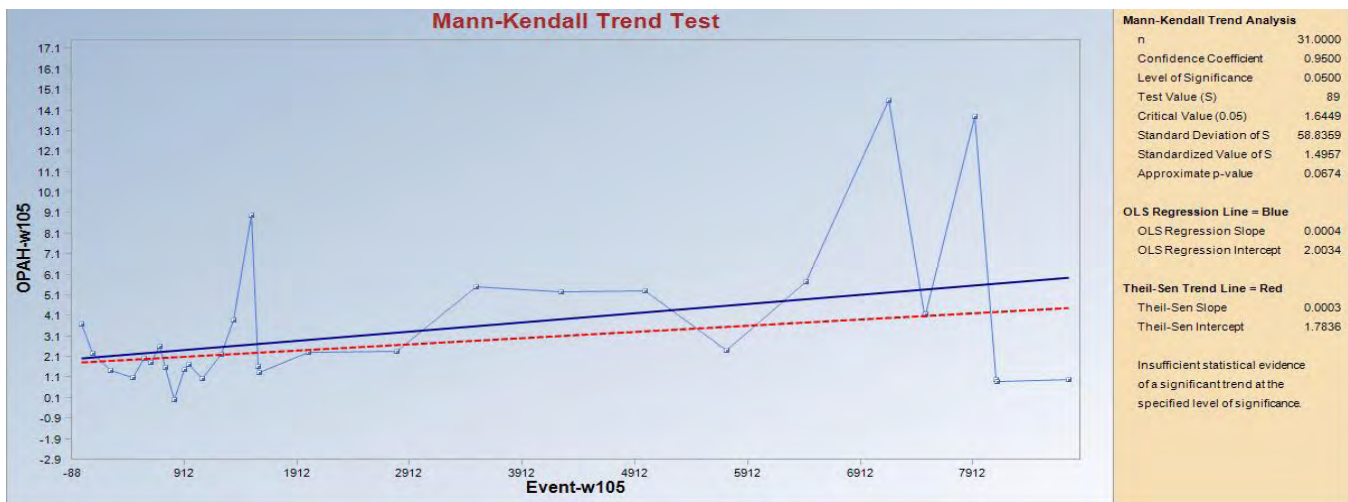
General Statistics

Number of Events	31
Number of Values	31
Minimum	0
Maximum	14.5462
Mean	3.4414574
Geometric Mean	0
Median	2.261
Standard Deviation	3.4413629
SEM	0.618087

Mann-Kendall Test

Test Value (S)	89
Critical Value (0.05)	1.6448536
Standard Deviation of S	58.83593
Standardized Value of S	1.4956847
Approximate p-value	0.0673679

Insufficient evidence to identify a significant trend at the specified level of significance.



Summary of Statistical PAH Trends

Prairie Du Chien					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
E13	Drinking Supply	37	No Change	No Change	Increasing
E15	Drinking Supply	30	No Change	No Change	No Change
E2	Drinking Supply	30	No Change	No Change	Decreasing
E3	Drinking Supply	25	No Change	No Change	Decreasing
E7	Drinking Supply	15	No Change	No Change	Increasing
H6	Drinking Supply	18	No Change	No Change	No Change
MTK6	Drinking Supply	8	No Change	No Change	No Change
SLP 10	Drinking Supply	26	No Change	Increasing	No Change
SLP 14	Drinking Supply	25	No Change	No Change	Decreasing
SLP 16	Drinking Supply	23	No Change	No Change	Decreasing
SLP 4	Drinking Supply	32	No Change	No Change	Decreasing
SLP 6	Drinking Supply	76	No Change	No Change	Increasing
W119	Irrigation	22	No Change	Increasing	Decreasing
W23	Pumping	43	Increasing	Increasing	Decreasing
W29	Industrial	23	No Change	No Change	Decreasing
W401	Irrigation	29	No Change	Decreasing	No Change
W402	Monitoring	26	No Change	Decreasing	Decreasing
W403	Monitoring	27	Increasing	Increasing	Decreasing
W406	Irrigation	19	No Change	No Change	Decreasing
W48	Irrigation	60	No Change	No Change	Decreasing

BaP DahA (sum)-E13

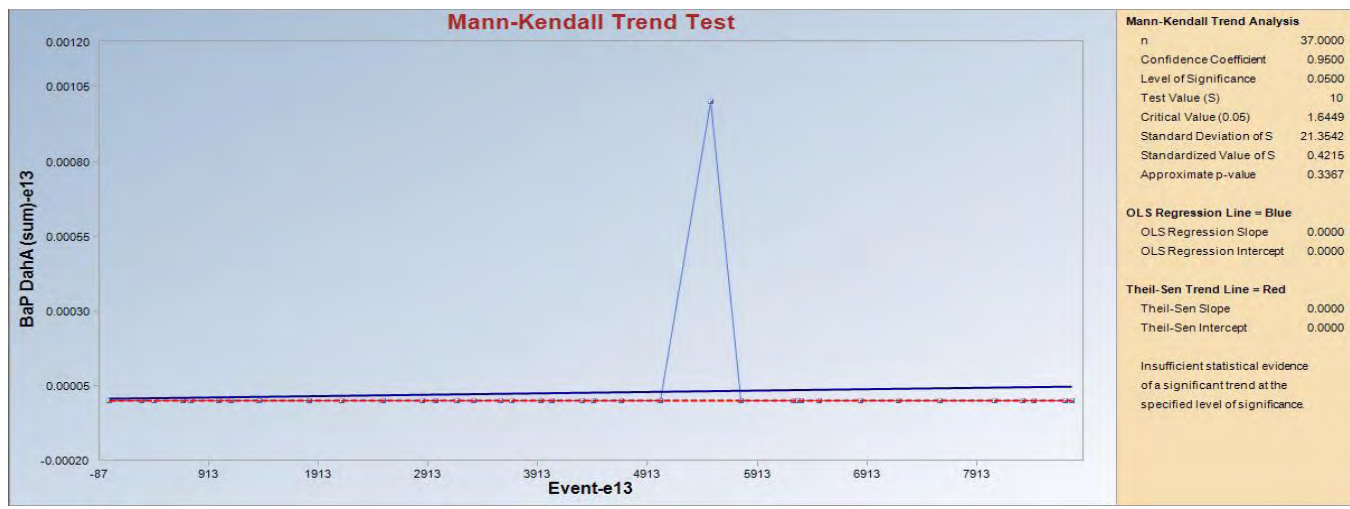
General Statistics

Number of Events	37
Number of Values	37
Minimum	0
Maximum	0.001
Mean	2.70E-05
Geometric Mean	0
Median	0
Standard Deviation	1.64E-04
SEM	2.70E-05

Mann-Kendall Test

Test Value (S)	10
Critical Value (0.05)	1.6448536
Standard Deviation of S	21.354157
Standardized Value of S	0.4214636
Approximate p-value	0.3367083

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - E13

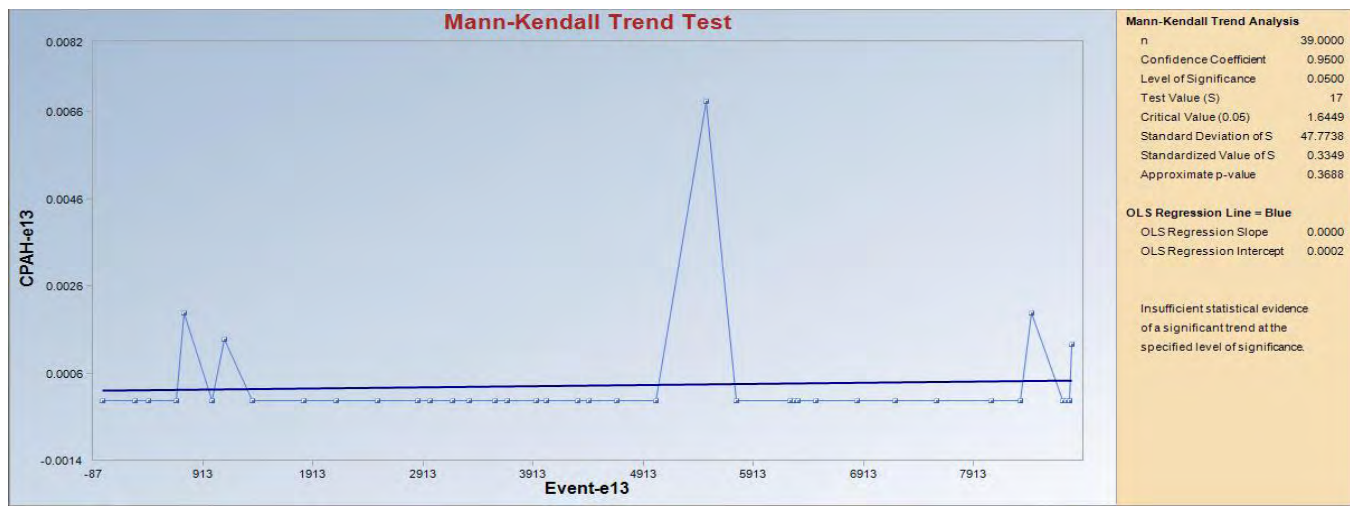
General Statistics

Number of Events	39
Number of Values	39
Minimum	0
Maximum	0.00686
Mean	3.48E-04
Geometric Mean	0
Median	0
Standard Deviation	0.001192
SEM	1.91E-04

Mann-Kendall Test

Test Value (S)	17
Critical Value (0.05)	1.6448536
Standard Deviation of S	47.773772
Standardized Value of S	0.3349118
Approximate p-value	0.3688458

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - E13

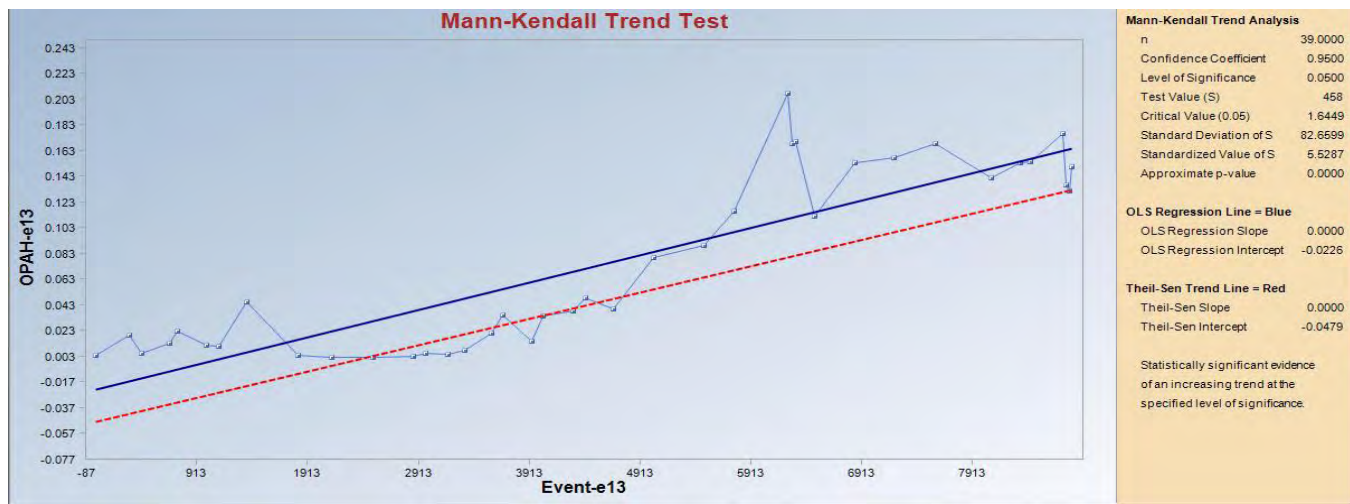
General Statistics

Number of Events	39
Number of Values	39
Minimum	0.003
Maximum	0.2079
Mean	0.0737841
Geometric Mean	0.0356423
Median	0.0405
Standard Deviation	0.0681893
SEM	0.010919

Mann-Kendall Test

Test Value (S)	458
Critical Value (0.05)	1.6448536
Standard Deviation of S	82.659946
Standardized Value of S	5.5286753
Approximate p-value	1.61E-08

Statistically significant evidence of an increasing trend at the specified level of significance.



BaP DahA (sum) - E15

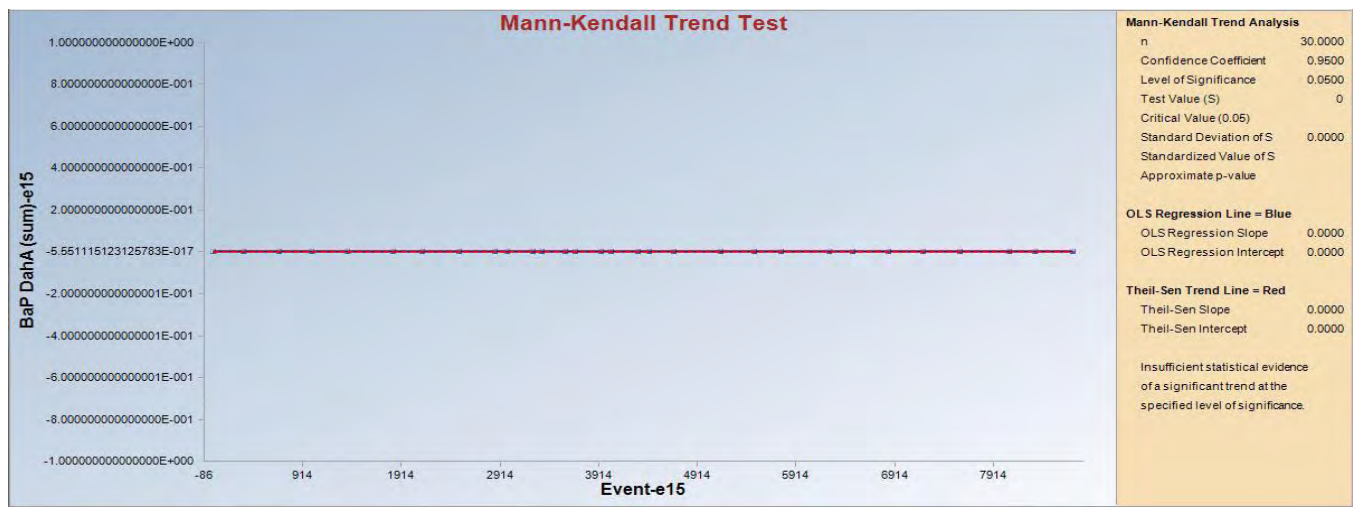
General Statistics

Number of Events	30
Number of Values	30
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - E15

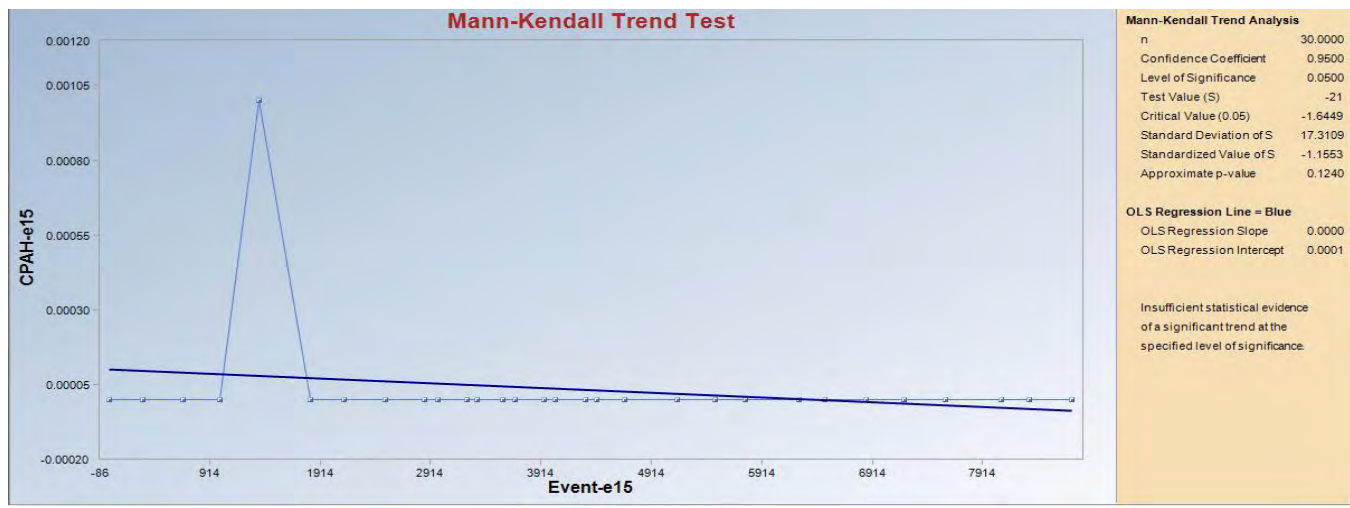
General Statistics

Number of Events	30
Number of Values	30
Minimum	0
Maximum	0.001
Mean	3.33E-05
Geometric Mean	0
Median	0
Standard Deviation	1.83E-04
SEM	3.33E-05

Mann-Kendall Test

Test Value (S)	-21
Critical Value (0.05)	-1.644854
Standard Deviation of S	17.310883
Standardized Value of S	-1.155343
Approximate p-value	0.1239751

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - E15

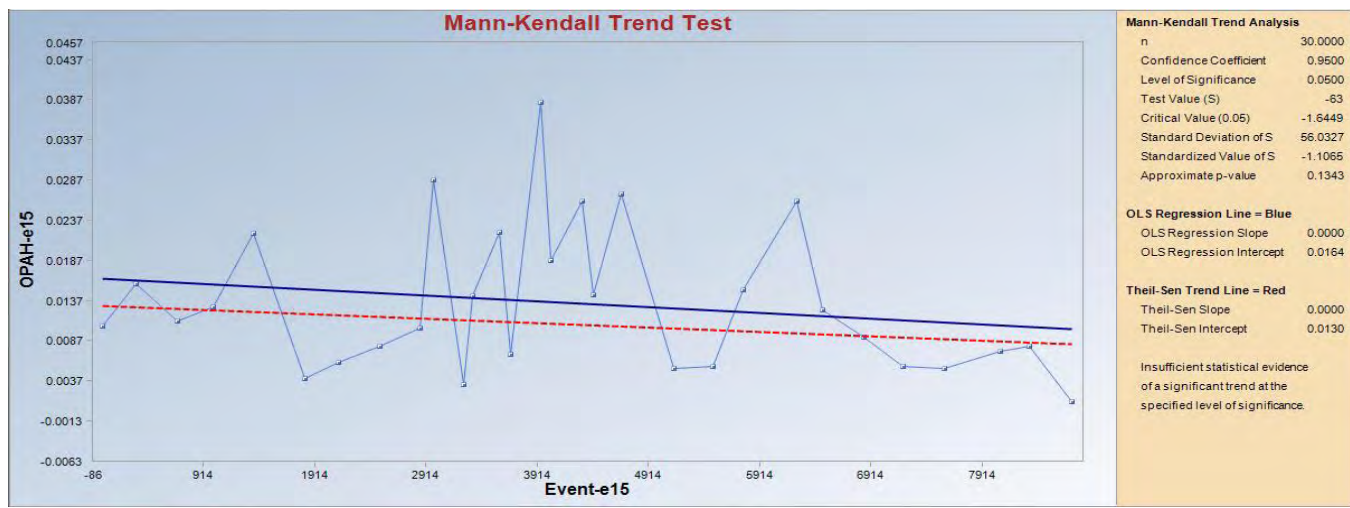
General Statistics

Number of Events	30
Number of Values	30
Minimum	0.0011
Maximum	0.0383
Mean	0.013341
Geometric Mean	0.010411
Median	0.0108
Standard Deviation	0.0090686
SEM	0.0016557

Mann-Kendall Test

Test Value (S)	-63
Critical Value (0.05)	-1.644854
Standard Deviation of S	56.032729
Standardized Value of S	-1.106496
Approximate p-value	0.1342559

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - E2

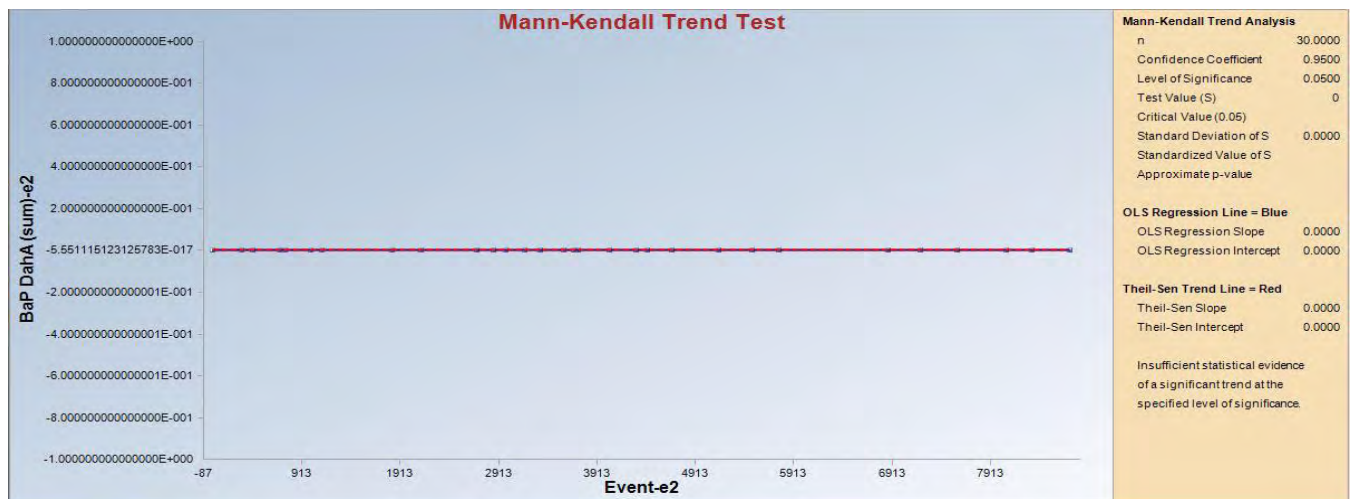
General Statistics

Number of Events	30
Number of Values	30
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum)-E2

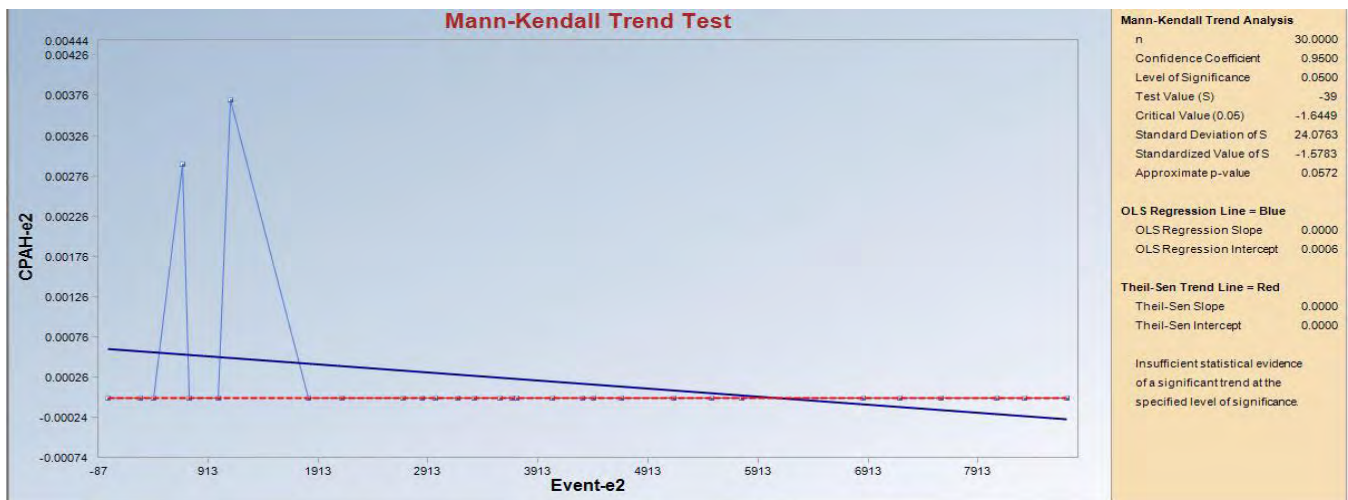
General Statistics

Number of Events	30
Number of Values	30
Minimum	0
Maximum	0.0037
Mean	2.20E-04
Geometric Mean	0
Median	0
Standard Deviation	8.44E-04
SEM	1.54E-04

Mann-Kendall Test

Test Value (S)	-39
Critical Value (0.05)	-1.644854
Standard Deviation of S	24.076268
Standardized Value of S	-1.578318
Approximate p-value	0.0572463

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum)-E2

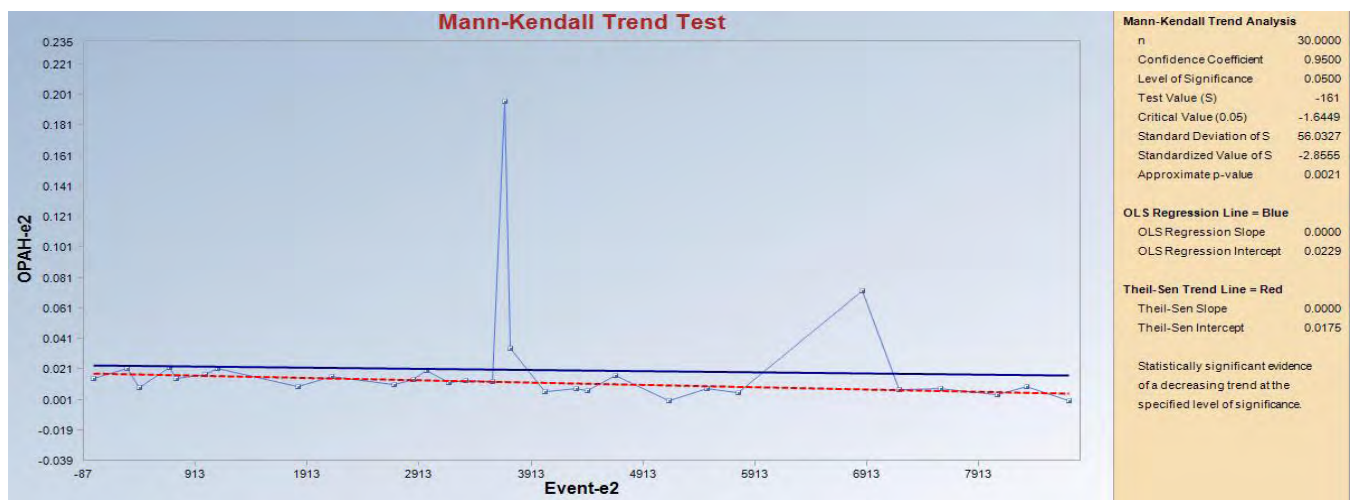
General Statistics

Number of Events	30
Number of Values	30
Minimum	0
Maximum	0.196
Mean	0.0200937
Geometric Mean	0
Median	0.012
Standard Deviation	0.0356812
SEM	0.0065145

Mann-Kendall Test

Test Value (S)	-161
Critical Value (0.05)	-1.644854
Standard Deviation of S	56.032729
Standardized Value of S	-2.855474
Approximate p-value	0.0021486

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - E3

General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - E3

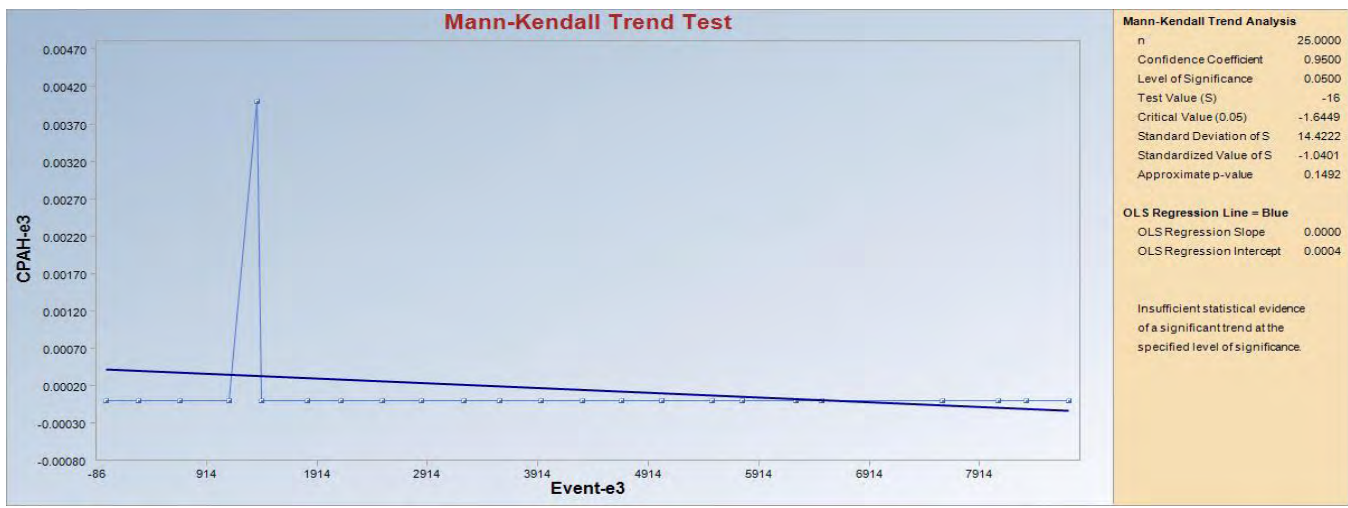
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.004
Mean	1.60E-04
Geometric Mean	0
Median	0
Standard Deviation	8.00E-04
SEM	1.60E-04

Mann-Kendall Test

Test Value (S)	-16
Critical Value (0.05)	-1.644854
Standard Deviation of S	14.422205
Standardized Value of S	-1.040063
Approximate p-value	0.1491553

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - E3

General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.021
Mean	0.00732
Geometric Mean	0
Median	0.005
Standard Deviation	0.0069127
SEM	0.0013825

Mann-Kendall Test

Test Value (S)	-109
Critical Value (0.05)	-1.644854
Standard Deviation of S	42.61064
Standardized Value of S	-2.534578
Approximate p-value	0.0056291

Statistically significant evidence of a decreasing trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

BaP DahA (sum) -E7

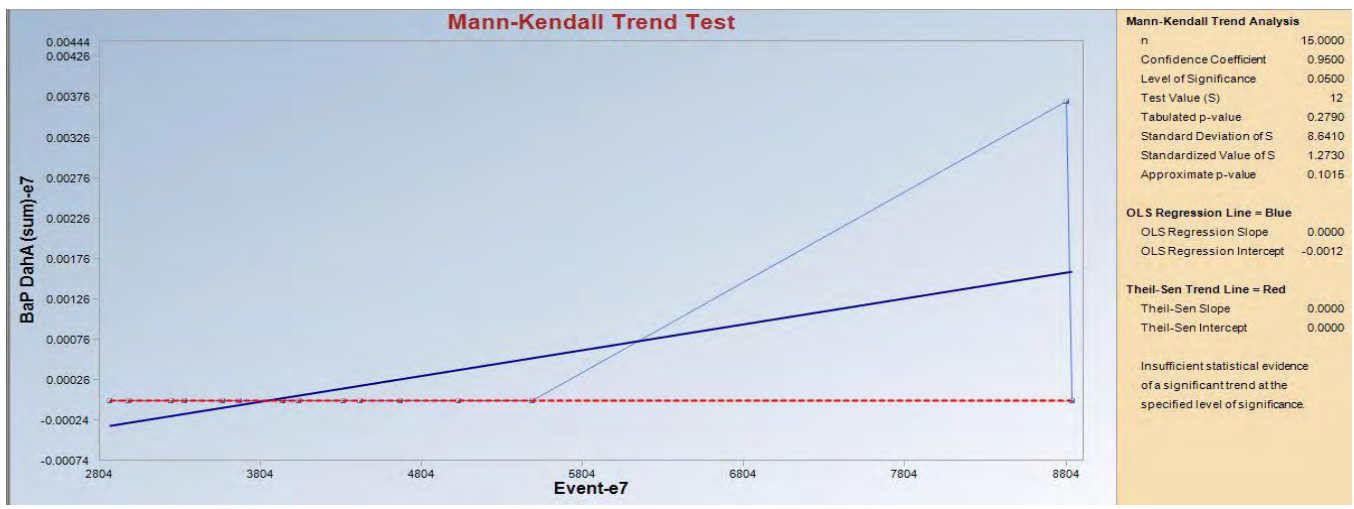
General Statistics

Number of Events	15
Number of Values	15
Minimum	0
Maximum	0.0037
Mean	2.47E-04
Geometric Mean	0
Median	0
Standard Deviation	9.55E-04
SEM	2.47E-04

Mann-Kendall Test

Test Value (S)	12
Tabulated p-value	0.279
Standard Deviation of S	8.6409876
Standardized Value of S	1.2730026
Approximate p-value	0.1015086

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - E7

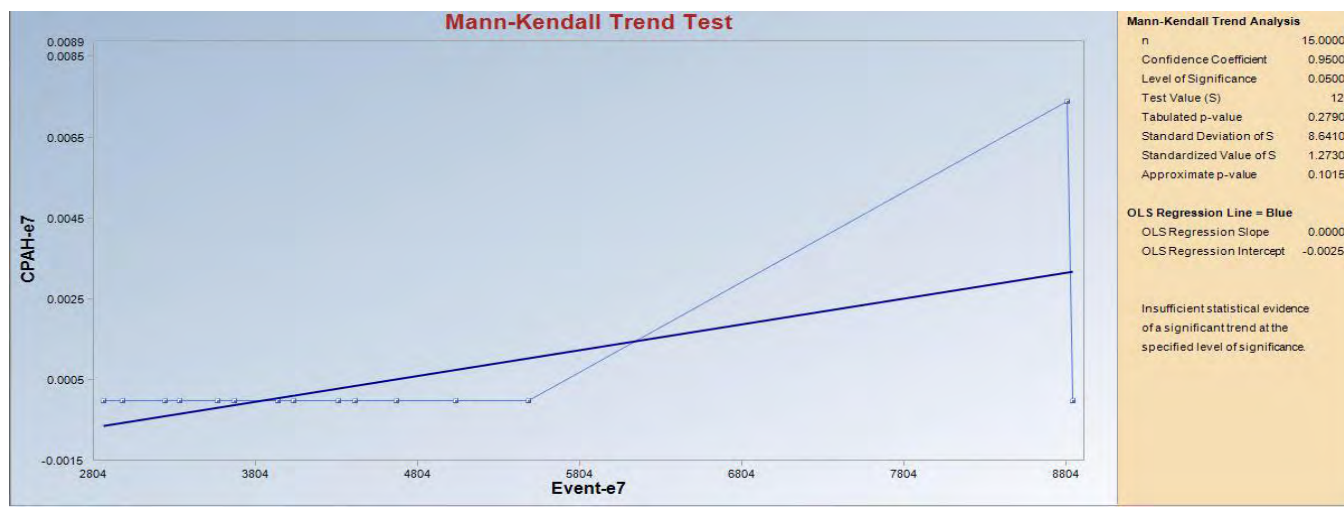
General Statistics

Number of Events	15
Number of Values	15
Minimum	0
Maximum	0.0074
Mean	4.93E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0019107
SEM	4.93E-04

Mann-Kendall Test

Test Value (S)	12
Tabulated p-value	0.279
Standard Deviation of S	8.6409876
Standardized Value of S	1.2730026
Approximate p-value	0.1015086

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - E7

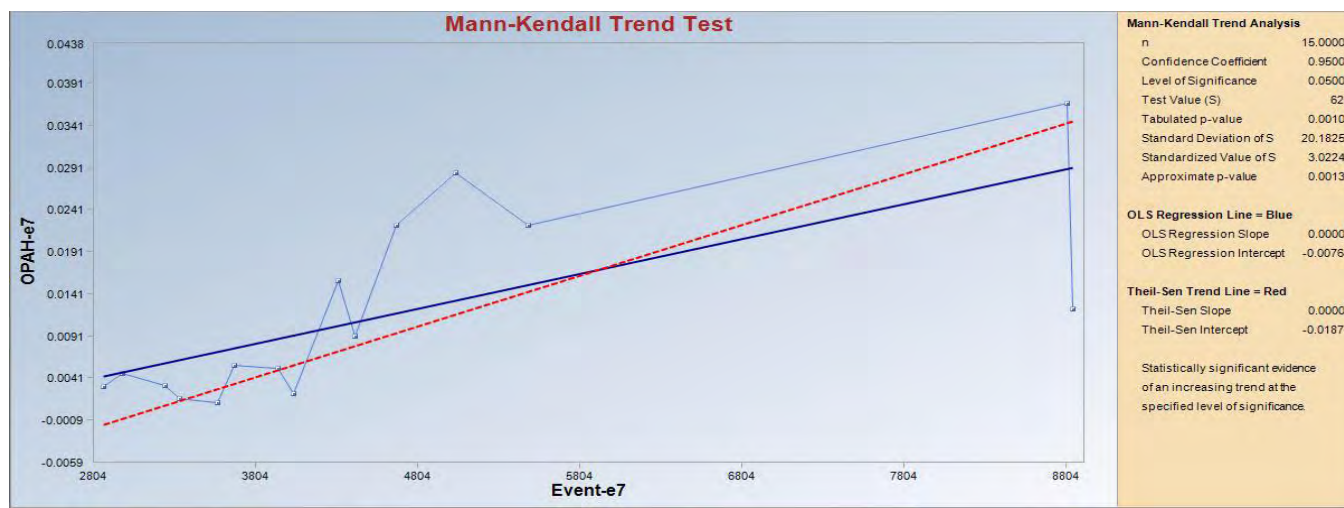
General Statistics

Number of Events	15
Number of Values	15
Minimum	0.0012
Maximum	0.0367
Mean	0.0115667
Geometric Mean	0.0070605
Median	0.0056
Standard Deviation	0.0111072
SEM	0.0028679

Mann-Kendall Test

Test Value (S)	62
Tabulated p-value	0.001
Standard Deviation of S	20.182501
Standardized Value of S	3.0224203
Approximate p-value	0.0012538

Statistically significant evidence of an increasing trend at the specified level of significance.



BaP DahA (sum) - H6

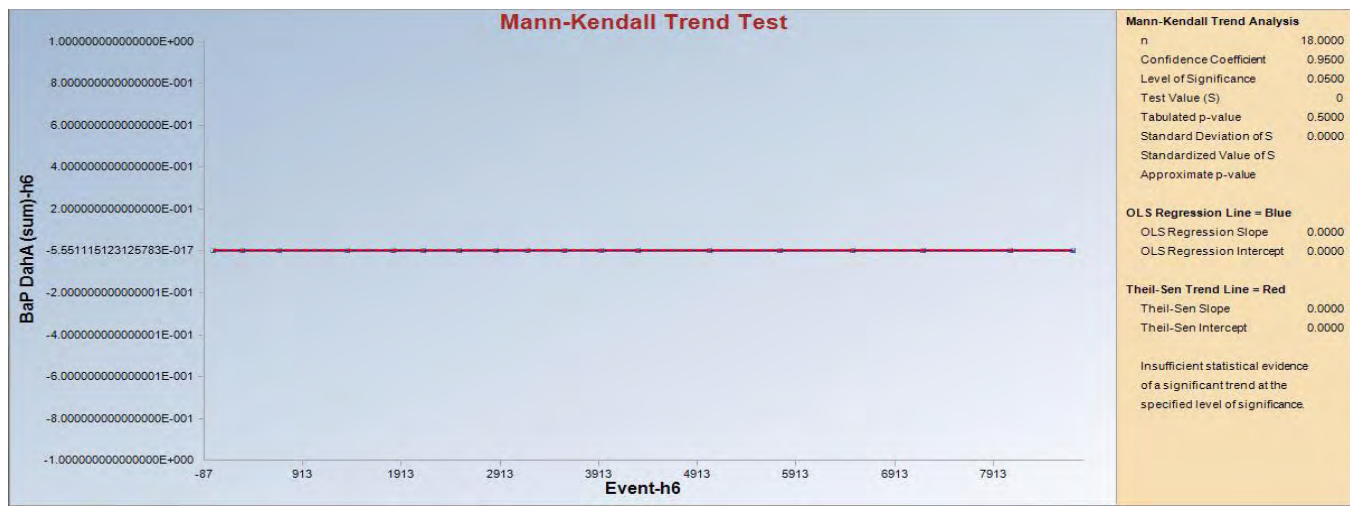
General Statistics

Number of Events	18
Number of Values	18
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.5
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - H6

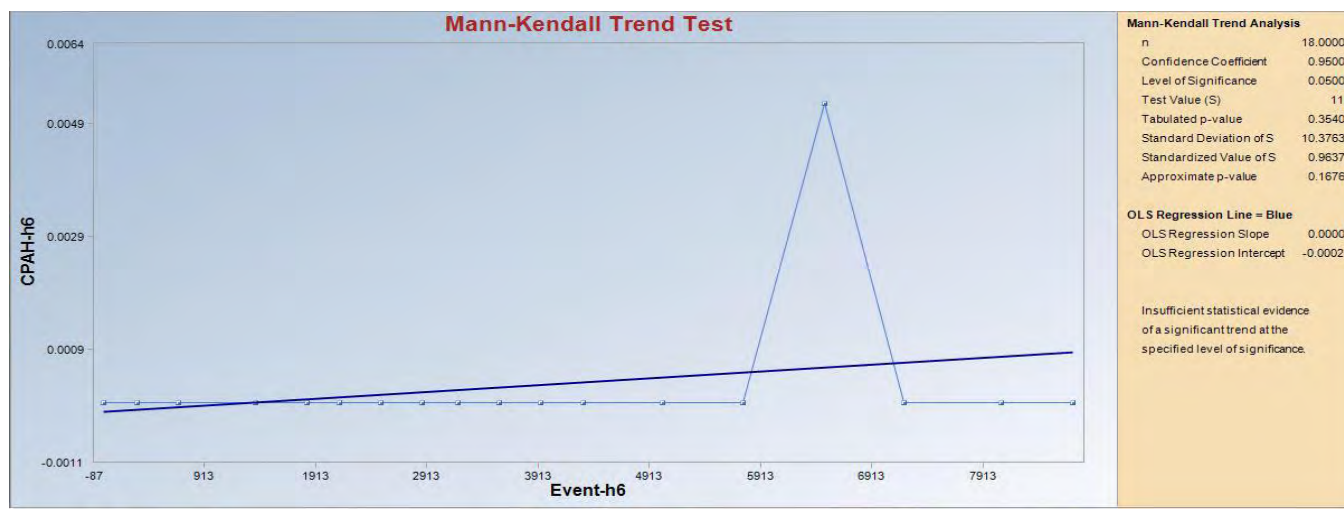
General Statistics

Number of Events	18
Number of Values	18
Minimum	0
Maximum	0.0053
Mean	2.94E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0012492
SEM	2.94E-04

Mann-Kendall Test

Test Value (S)	11
Tabulated p-value	0.354
Standard Deviation of S	10.376255
Standardized Value of S	0.9637388
Approximate p-value	0.1675884

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - H6

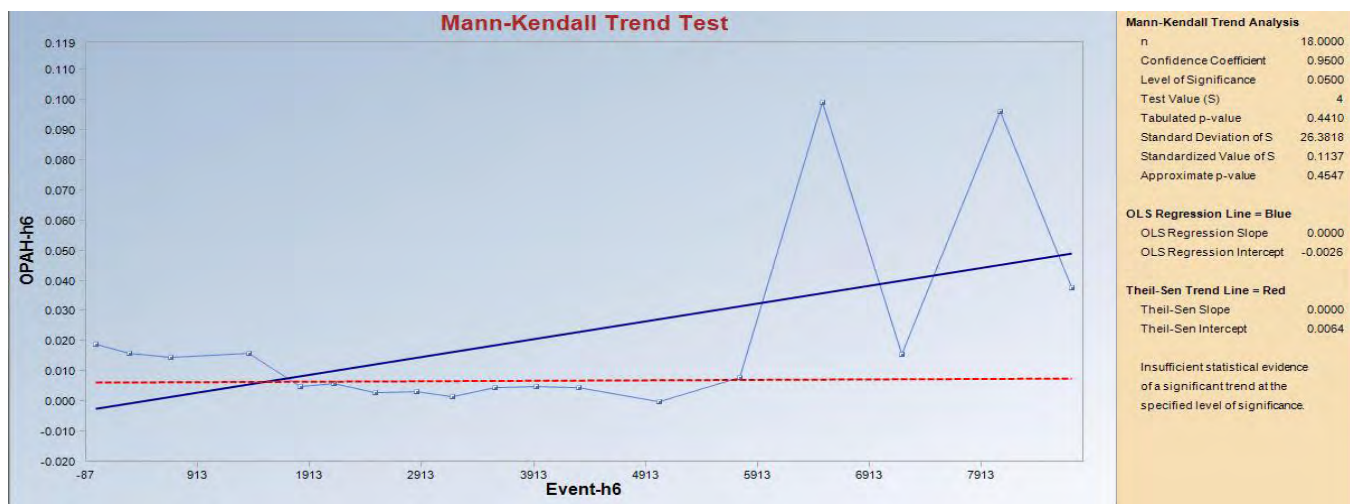
General Statistics

Number of Events	18
Number of Values	18
Minimum	0
Maximum	0.0991
Mean	0.0197072
Geometric Mean	0
Median	0.0069
Standard Deviation	0.029774
SEM	0.0070178

Mann-Kendall Test

Test Value (S)	4
Tabulated p-value	0.441
Standard Deviation of S	26.381812
Standardized Value of S	0.1137147
Approximate p-value	0.454732

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - MTK6

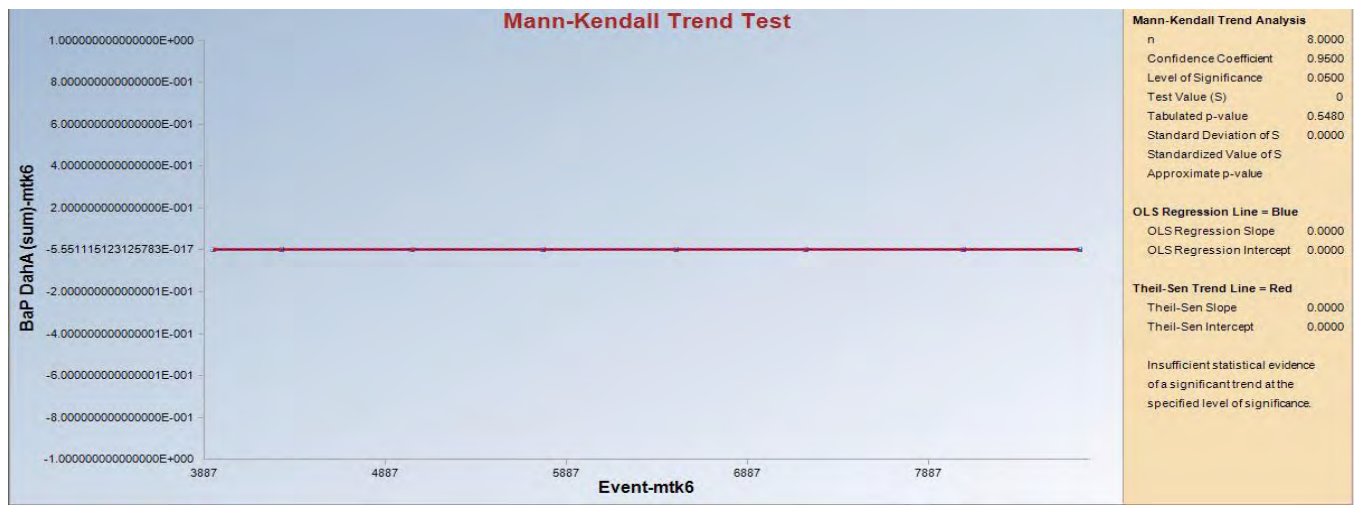
General Statistics

Number of Events	8
Number of Values	8
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.548
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

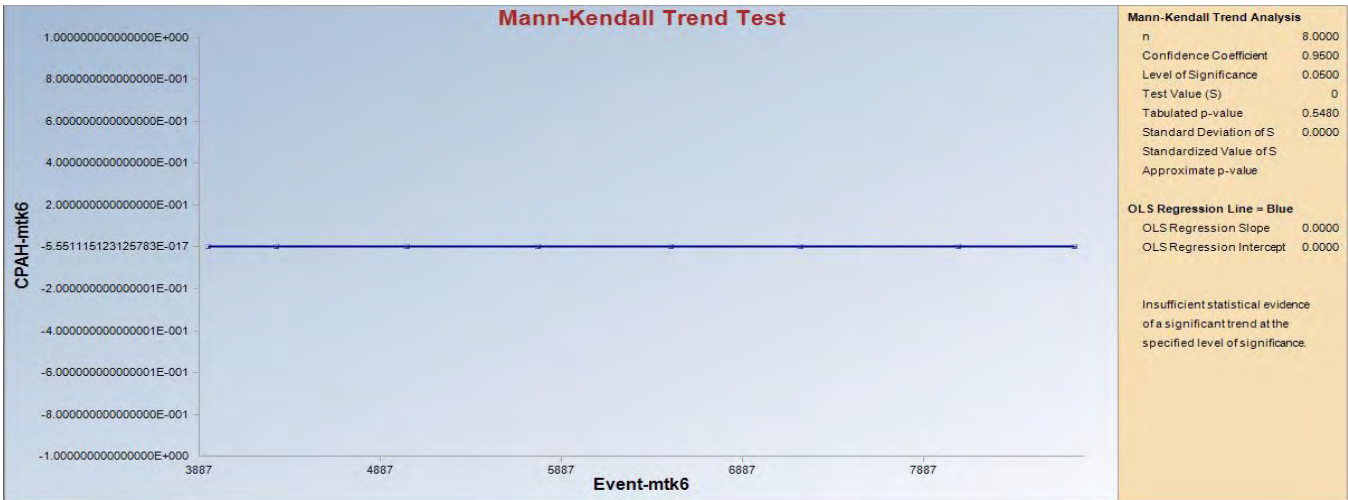
Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - MTK6

General Statistics	
Number of Events	8
Number of Values	8
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0
Mann-Kendall Test	
Test Value (S)	0
Tabulated p-value	0.548
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (SUM) - MTK6

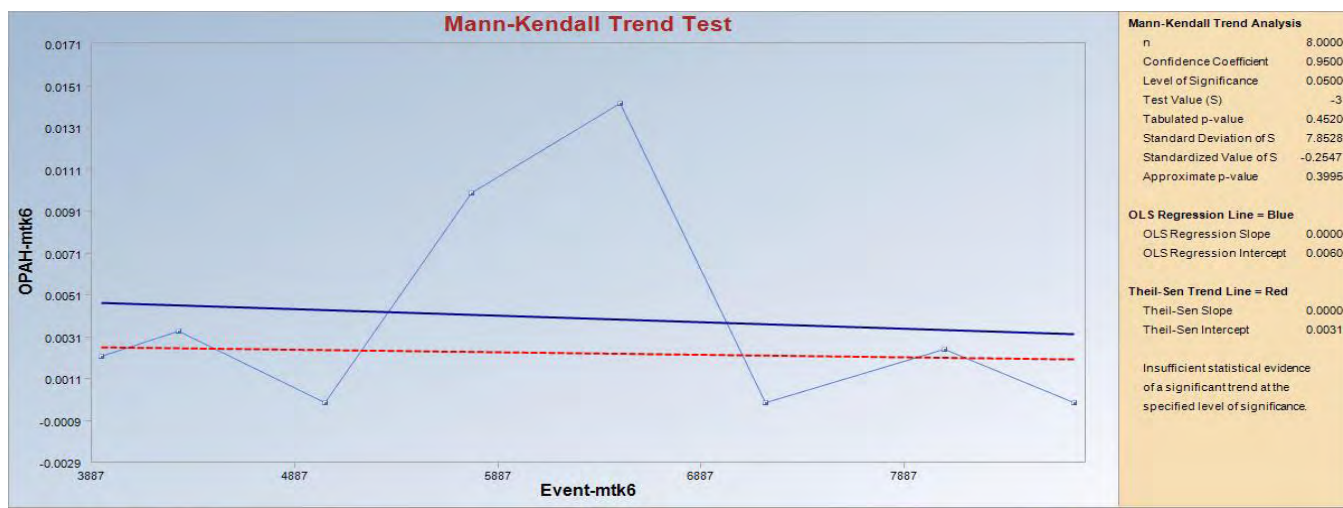
General Statistics

Number of Events	8
Number of Values	8
Minimum	0
Maximum	0.0143
Mean	0.0040538
Geometric Mean	0
Median	0.002365
Standard Deviation	0.0052892
SEM	0.00187

Mann-Kendall Test

Test Value (S)	-3
Tabulated p-value	0.452
Standard Deviation of S	7.8528127
Standardized Value of S	-0.254686
Approximate p-value	0.3994829

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - SLP 10

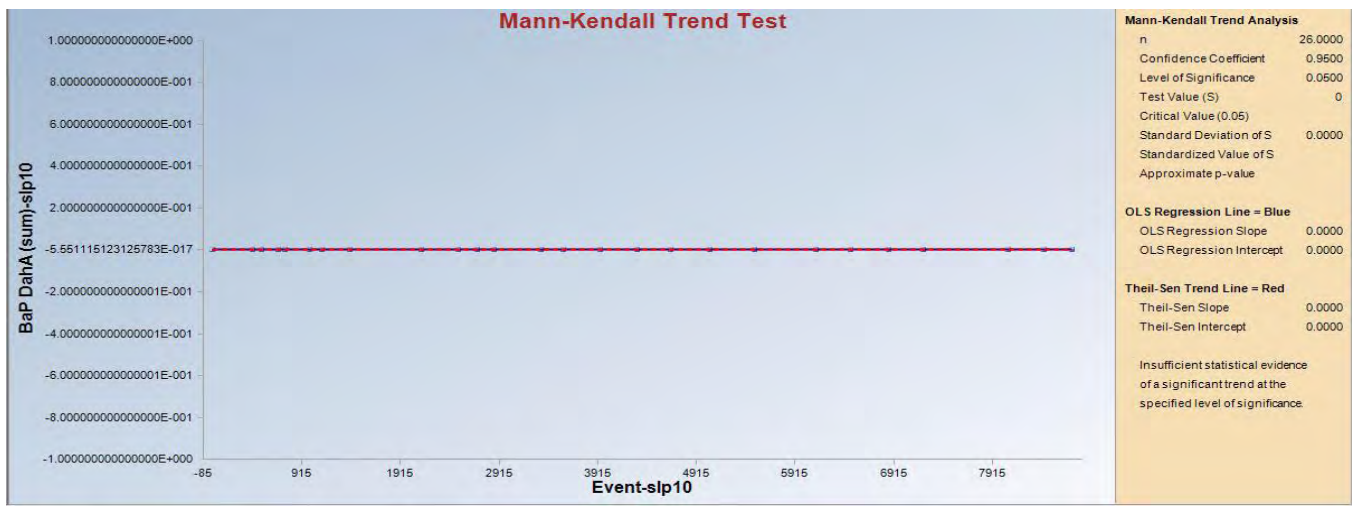
General Statistics

Number of Events	26
Number of Values	26
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (SUM) - SLP 10

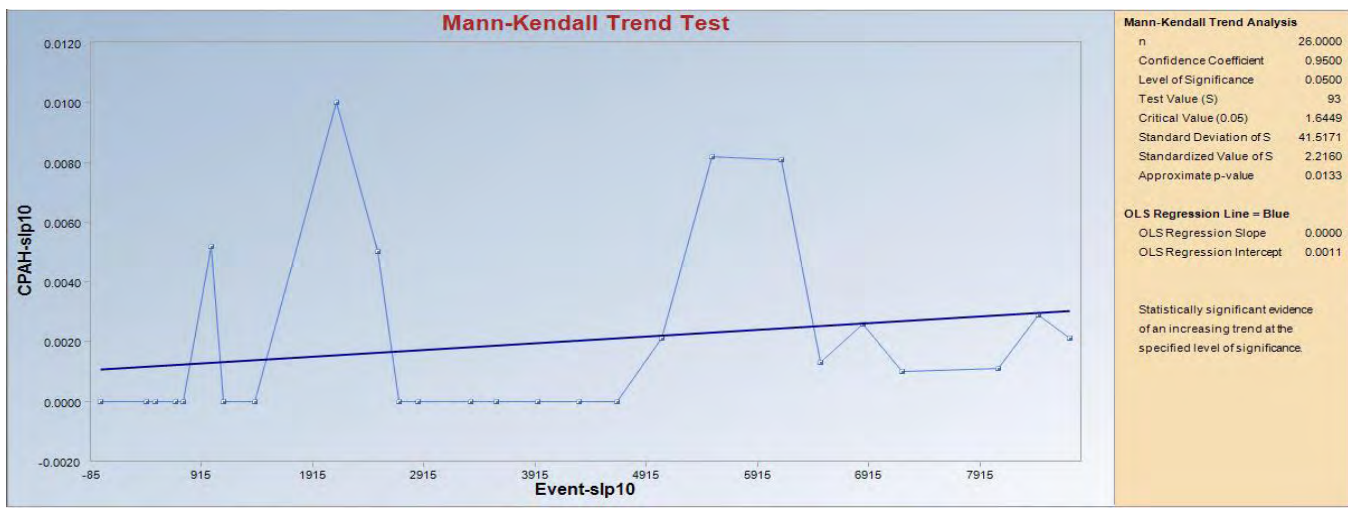
General Statistics

Number of Events	26
Number of Values	26
Minimum	0
Maximum	0.01
Mean	0.0019069
Geometric Mean	0
Median	0
Standard Deviation	0.0029533
SEM	5.79E-04

Mann-Kendall Test

Test Value (S)	93
Critical Value (0.05)	1.6448536
Standard Deviation of S	41.517065
Standardized Value of S	2.2159563
Approximate p-value	0.0133472

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (SUM) - SLP 10

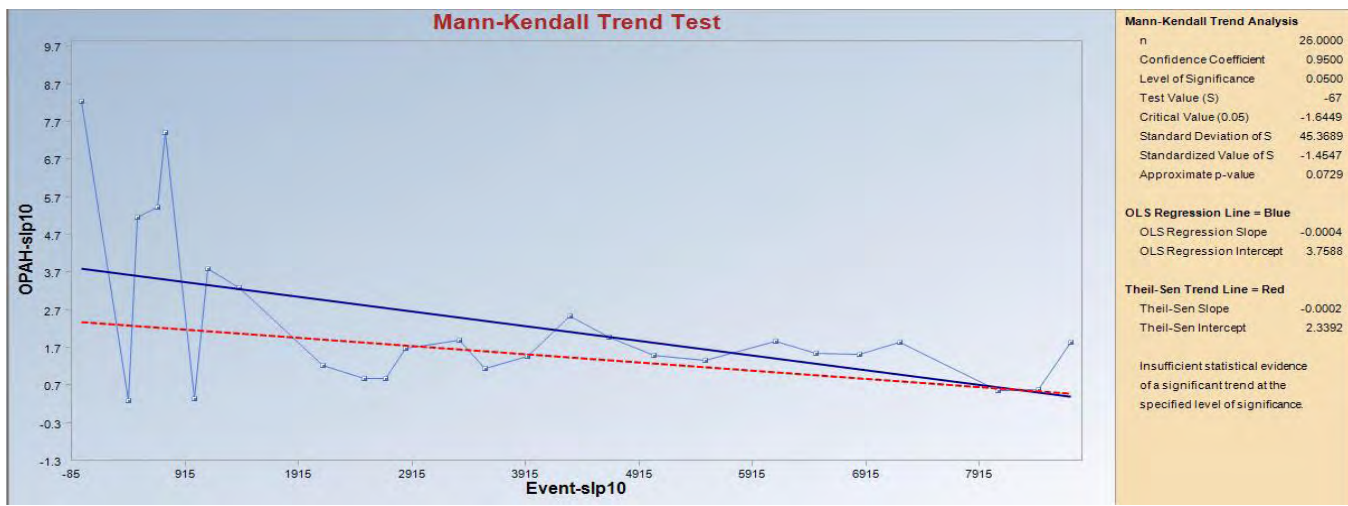
General Statistics

Number of Events	26
Number of Values	26
Minimum	0.26
Maximum	8.2
Mean	2.281895
Geometric Mean	1.6117034
Median	1.584505
Standard Deviation	2.0758518
SEM	0.407108

Mann-Kendall Test

Test Value (S)	-67
Critical Value (0.05)	-1.644854
Standard Deviation of S	45.368859
Standardized Value of S	-1.454742
Approximate p-value	0.0728703

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - SLP 14

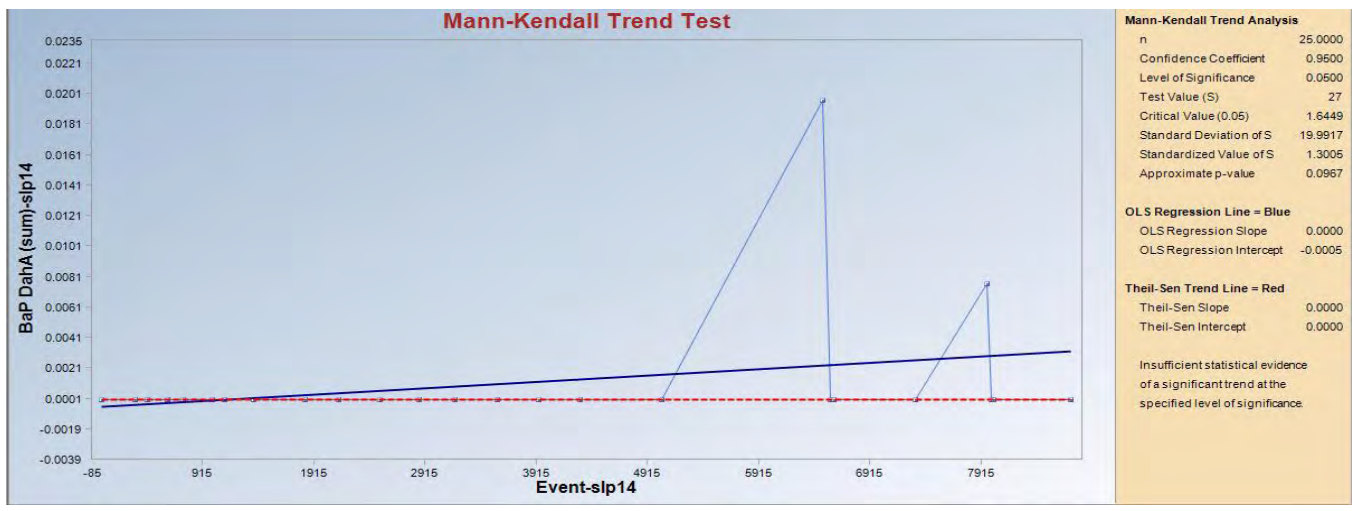
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0196
Mean	0.001088
Geometric Mean	0
Median	0
Standard Deviation	0.0041449
SEM	8.29E-04

Mann-Kendall Test

Test Value (S)	27
Critical Value (0.05)	1.6448536
Standard Deviation of S	19.991665
Standardized Value of S	1.300542
Approximate p-value	0.0967076

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 14

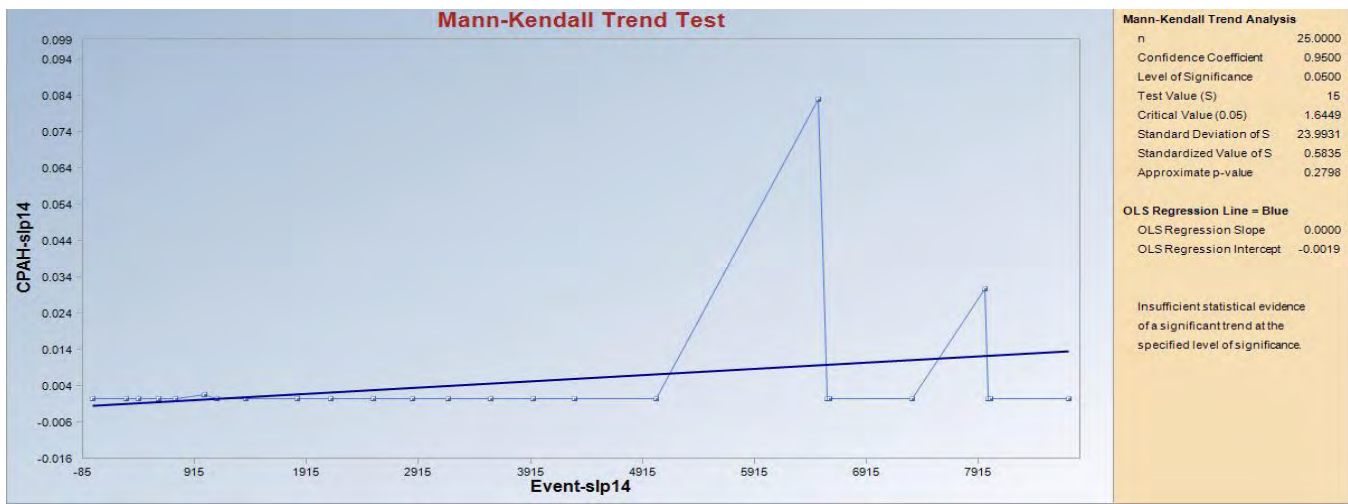
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0823
Mean	0.004536
Geometric Mean	0
Median	0
Standard Deviation	0.0172795
SEM	0.0034559

Mann-Kendall Test

Test Value (S)	15
Critical Value (0.05)	1.6448536
Standard Deviation of S	23.993055
Standardized Value of S	0.5835022
Approximate p-value	0.2797776

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - SLP 14

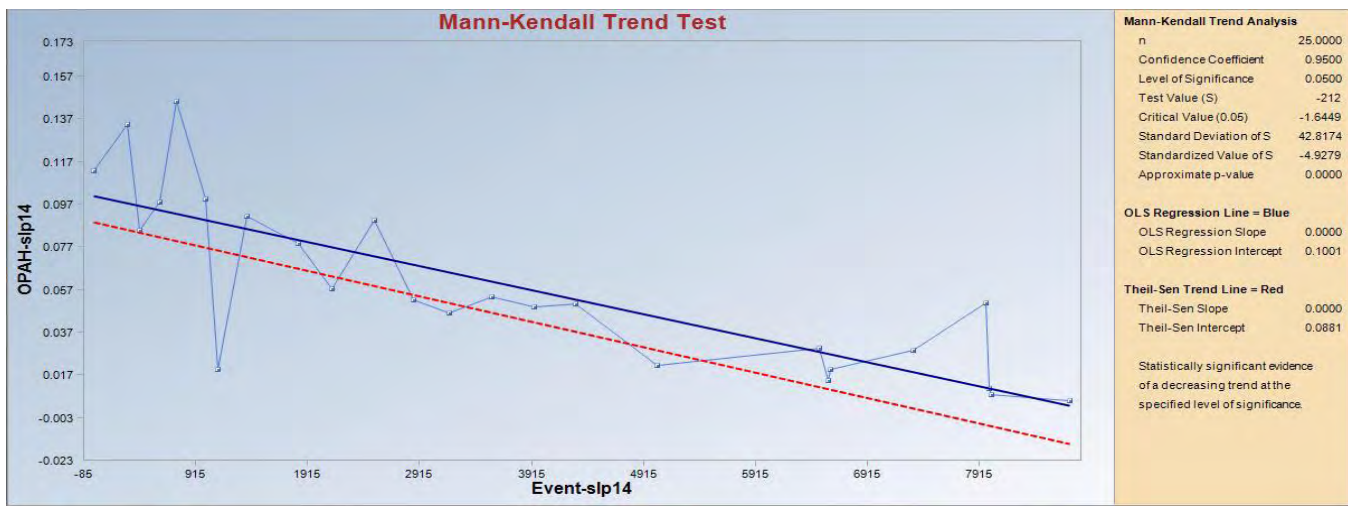
General Statistics

Number of Events	25
Number of Values	25
Minimum	0.0046
Maximum	0.1446
Mean	0.0575116
Geometric Mean	0.0415448
Median	0.0502
Standard Deviation	0.0402051
SEM	0.008041

Mann-Kendall Test

Test Value (S)	-212
Critical Value (0.05)	-1.644854
Standard Deviation of S	42.817442
Standardized Value of S	-4.927898
Approximate p-value	4.16E-07

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - SLP 16

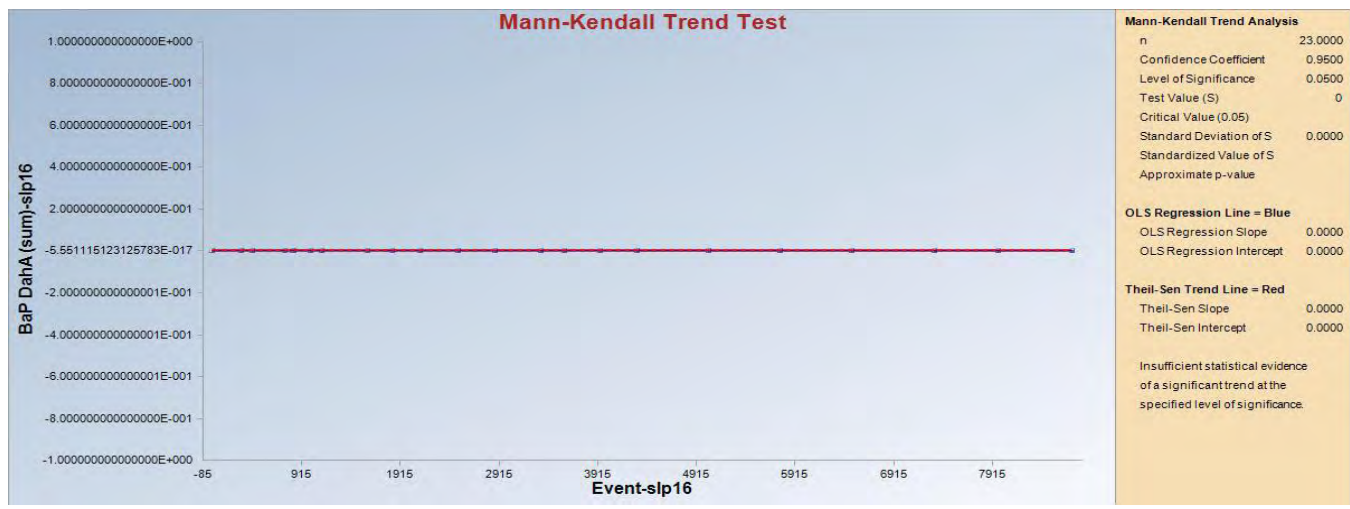
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 16

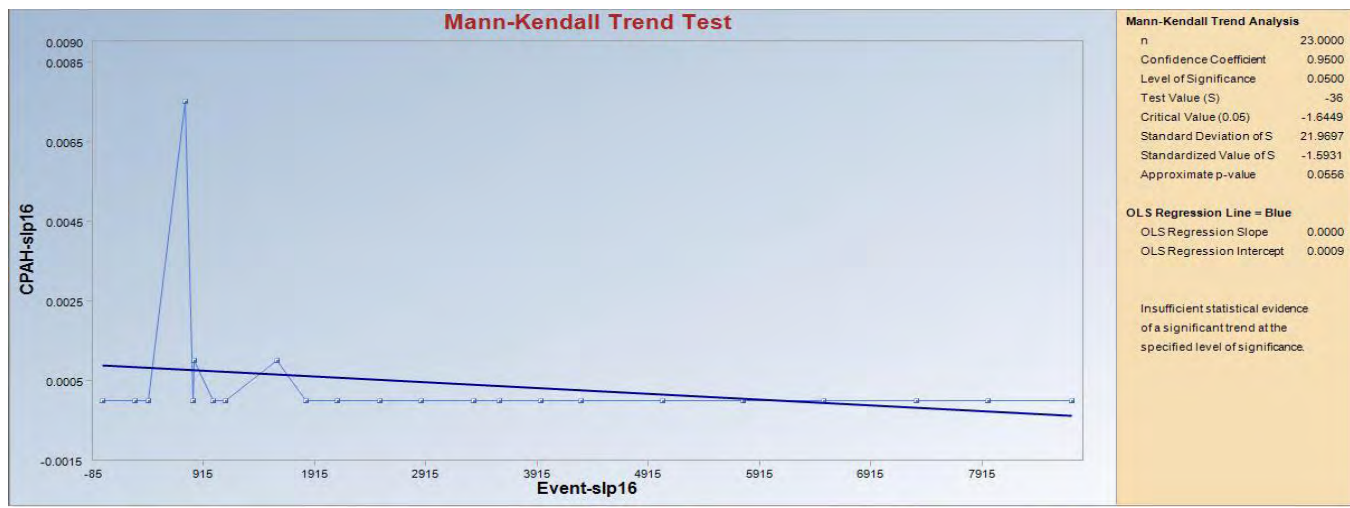
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.0075
Mean	4.13E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0015714
SEM	3.28E-04

Mann-Kendall Test

Test Value (S)	-36
Critical Value (0.05)	-1.644854
Standard Deviation of S	21.969676
Standardized Value of S	-1.593105
Approximate p-value	0.0555683

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - SLP 16

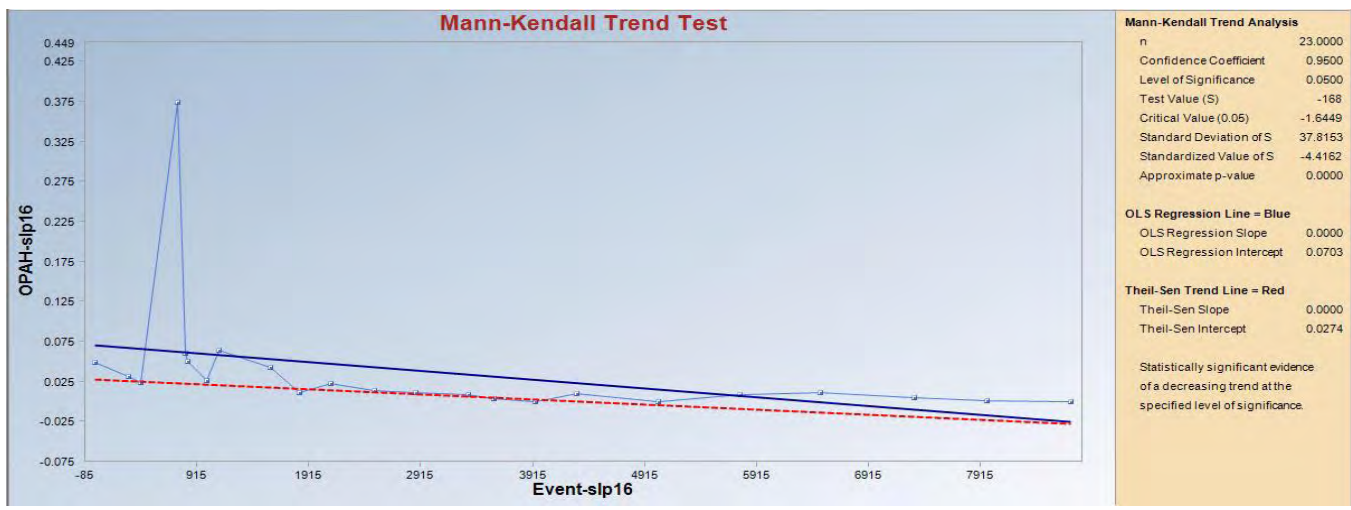
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.3738
Mean	0.0357965
Geometric Mean	0
Median	0.01158
Standard Deviation	0.076296
SEM	0.0159088

Mann-Kendall Test

Test Value (S)	-168
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.815341
Standardized Value of S	-4.416197
Approximate p-value	5.02E-06

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - SLP 4

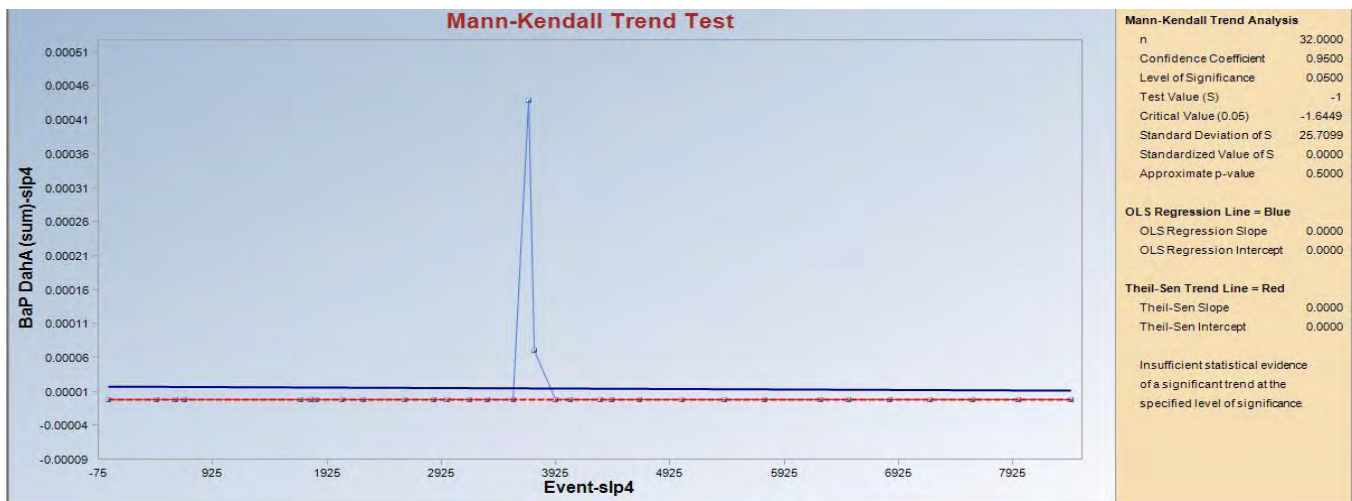
General Statistics

Number of Events	32
Number of Values	32
Minimum	0
Maximum	4.40E-04
Mean	1.60E-05
Geometric Mean	0
Median	0
Standard Deviation	7.84E-05
SEM	1.39E-05

Mann-Kendall Test

Test Value (S)	-1
Critical Value (0.05)	-1.644854
Standard Deviation of S	25.70992
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 4

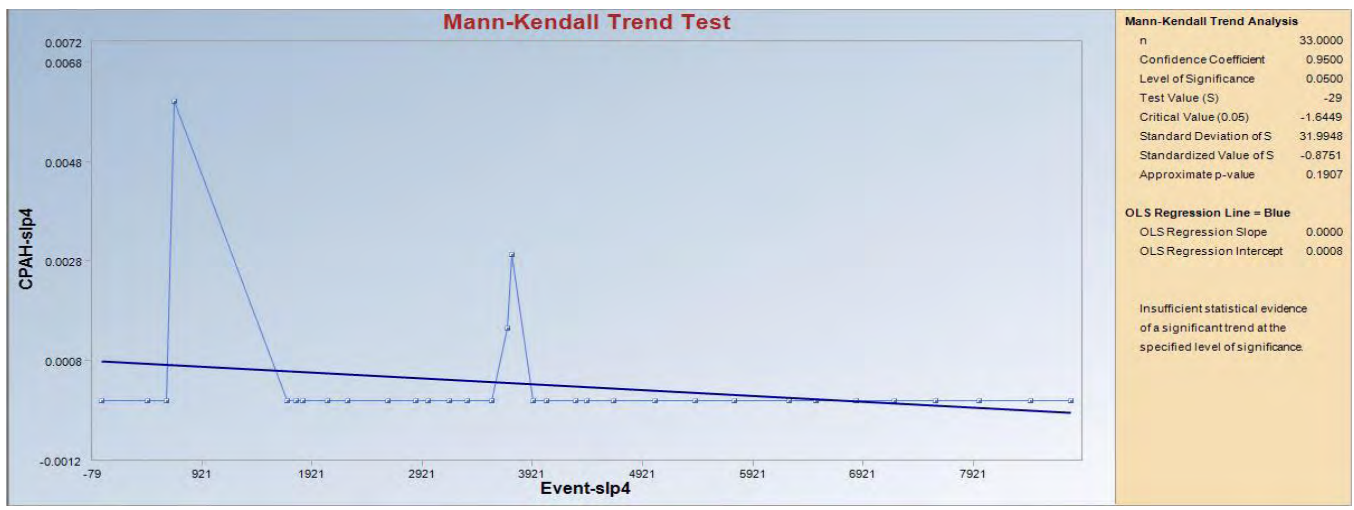
General Statistics

Number of Events	33
Number of Values	33
Minimum	0
Maximum	0.006
Mean	3.15E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0011651
SEM	2.03E-04

Mann-Kendall Test

Test Value (S)	-29
Critical Value (0.05)	-1.644854
Standard Deviation of S	31.994791
Standardized Value of S	-0.875142
Approximate p-value	0.1907482

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) -SLP 4

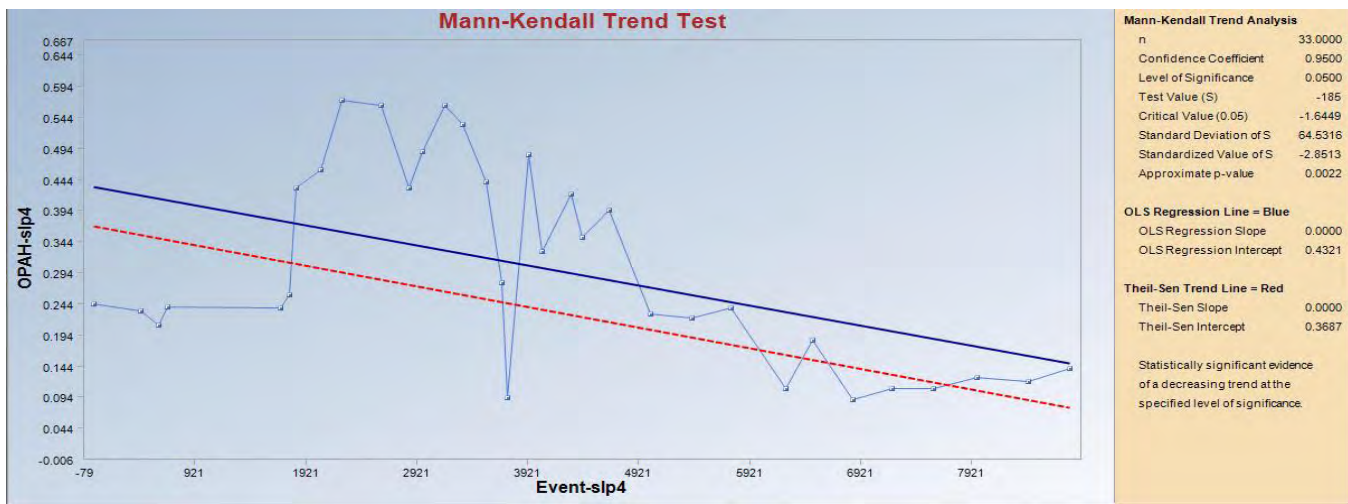
General Statistics

Number of Events	33
Number of Values	33
Minimum	0.09004
Maximum	0.571
Mean	0.3004957
Geometric Mean	0.2577445
Median	0.2444
Standard Deviation	0.1566778
SEM	0.0272741

Mann-Kendall Test

Test Value (S)	-185
Critical Value (0.05)	-1.644854
Standard Deviation of S	64.531646
Standardized Value of S	-2.851314
Approximate p-value	0.0021769

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - SLP 6

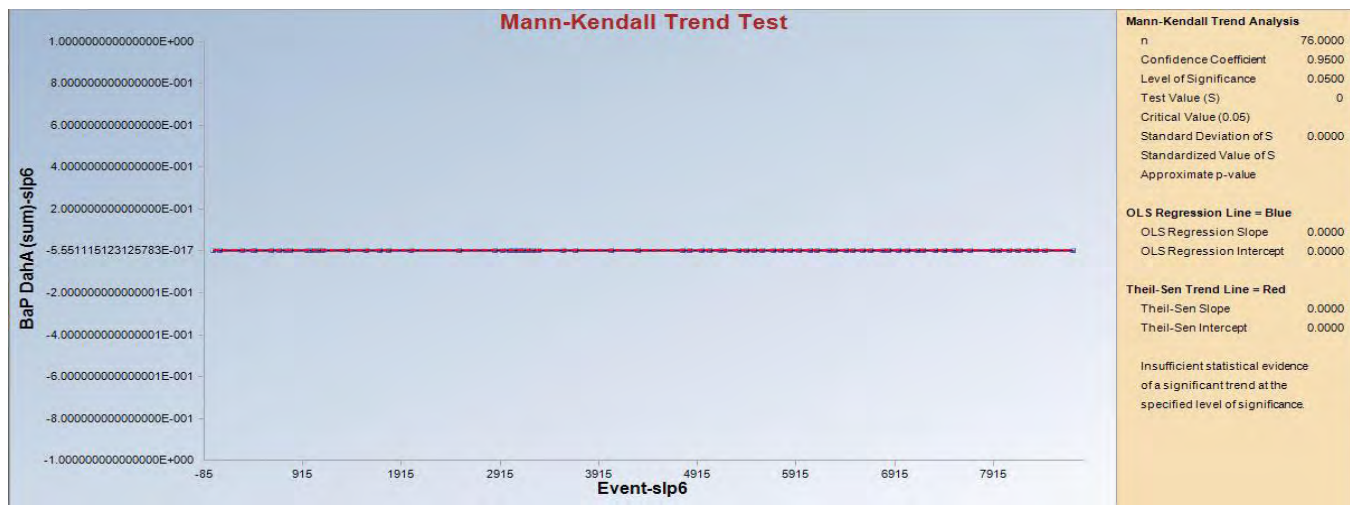
General Statistics

Number of Events	76
Number of Values	76
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - SLP 6

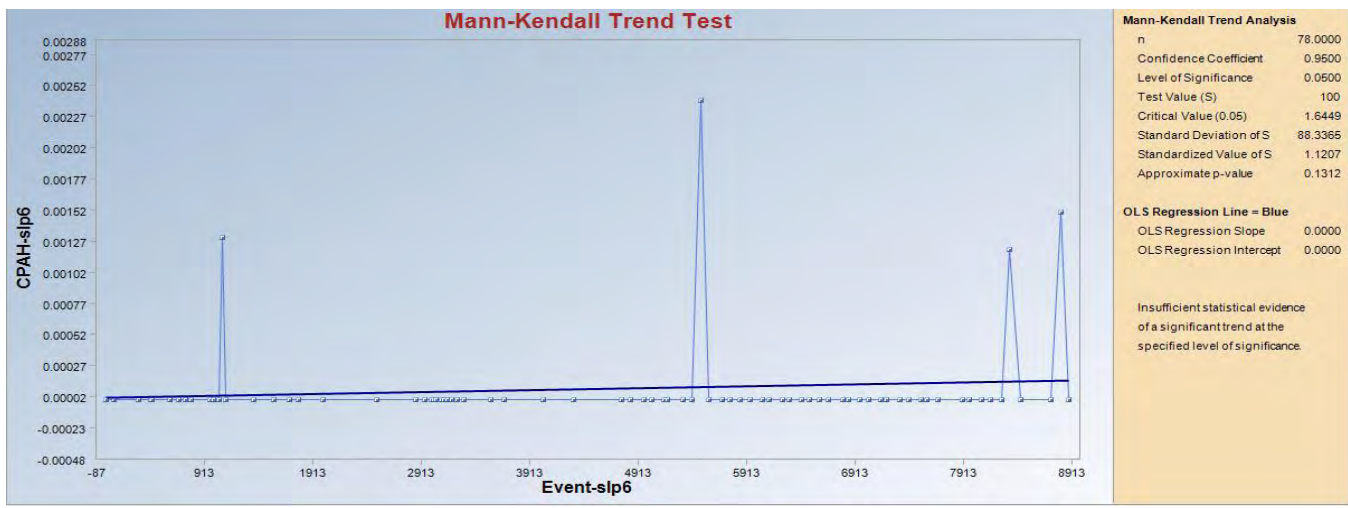
General Statistics

Number of Events	78
Number of Values	78
Minimum	0
Maximum	0.0024
Mean	8.21E-05
Geometric Mean	0
Median	0
Standard Deviation	3.71E-04
SEM	4.20E-05

Mann-Kendall Test

Test Value (S)	100
Critical Value (0.05)	1.6448536
Standard Deviation of S	88.336478
Standardized Value of S	1.1207148
Approximate p-value	0.1312046

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - SLP 6

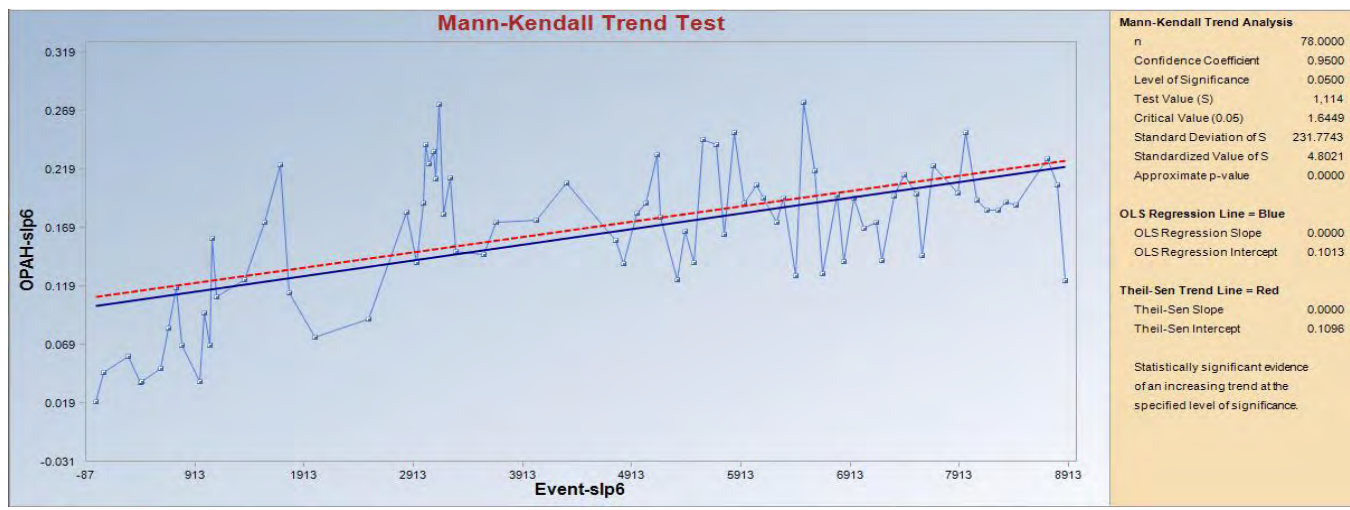
General Statistics

Number of Events	78
Number of Values	78
Minimum	0.0198
Maximum	0.2753
Mean	0.1631127
Geometric Mean	0.1467851
Median	0.17595
Standard Deviation	0.0602729
SEM	0.0068246

Mann-Kendall Test

Test Value (S)	1114
Critical Value (0.05)	1.6448536
Standard Deviation of S	231.77432
Standardized Value of S	4.8020852
Approximate p-value	7.85E-07

Statistically significant evidence of an increasing trend at the specified level of significance.



BaP DahA (sum) - W119

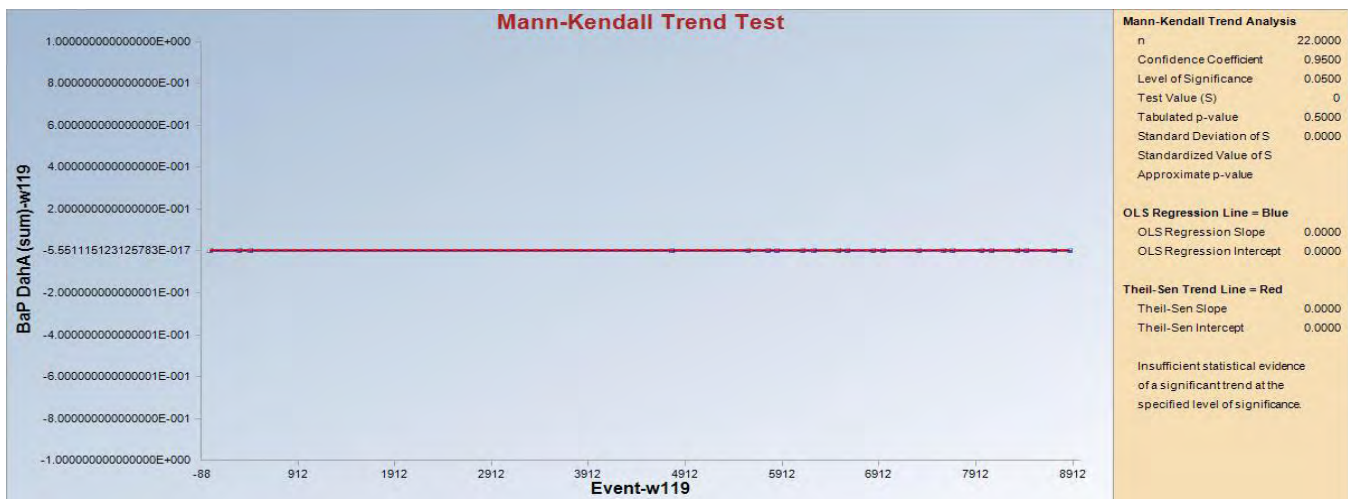
General Statistics

Number of Events	22
Number of Values	22
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.5
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W119

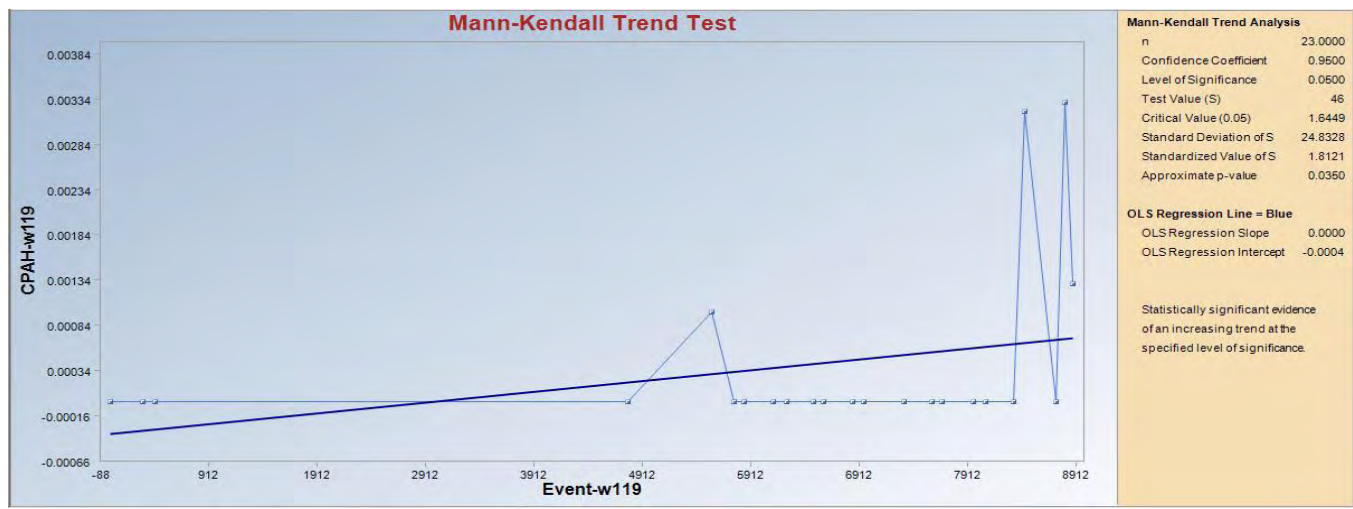
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.0033
Mean	3.82E-04
Geometric Mean	0
Median	0
Standard Deviation	9.64E-04
SEM	2.01E-04

Mann-Kendall Test

Test Value (S)	46
Critical Value (0.05)	1.6448536
Standard Deviation of S	24.832774
Standardized Value of S	1.8121213
Approximate p-value	0.0349837

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W119

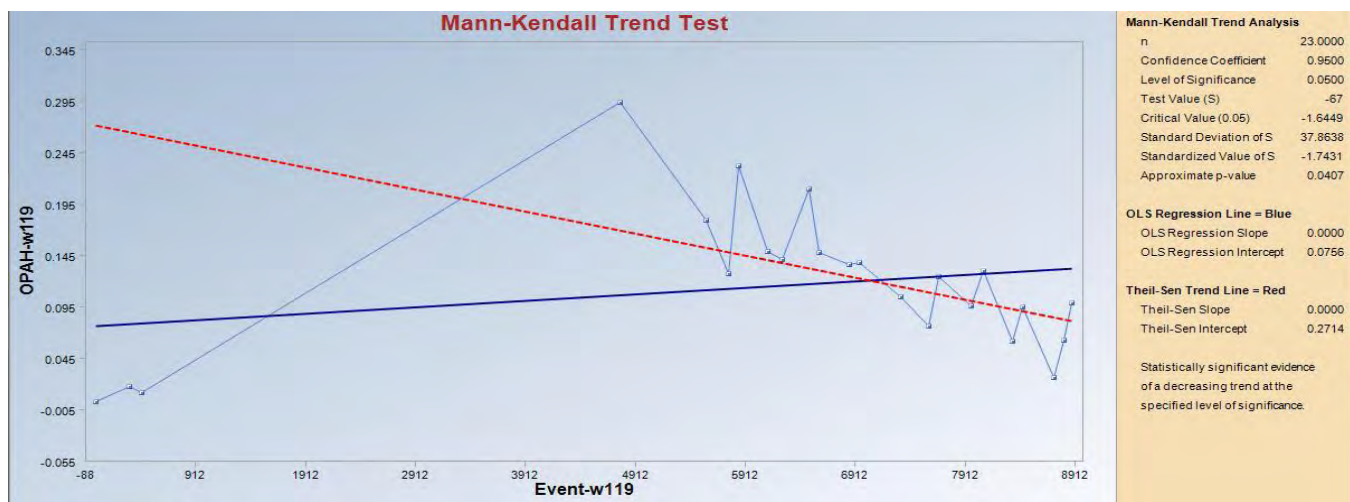
General Statistics

Number of Events	23
Number of Values	23
Minimum	0.0027
Maximum	0.2936
Mean	0.1155139
Geometric Mean	0.0822863
Median	0.1243
Standard Deviation	0.0713974
SEM	0.0148874

Mann-Kendall Test

Test Value (S)	-67
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.863791
Standardized Value of S	-1.74309
Approximate p-value	0.0406589

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W23

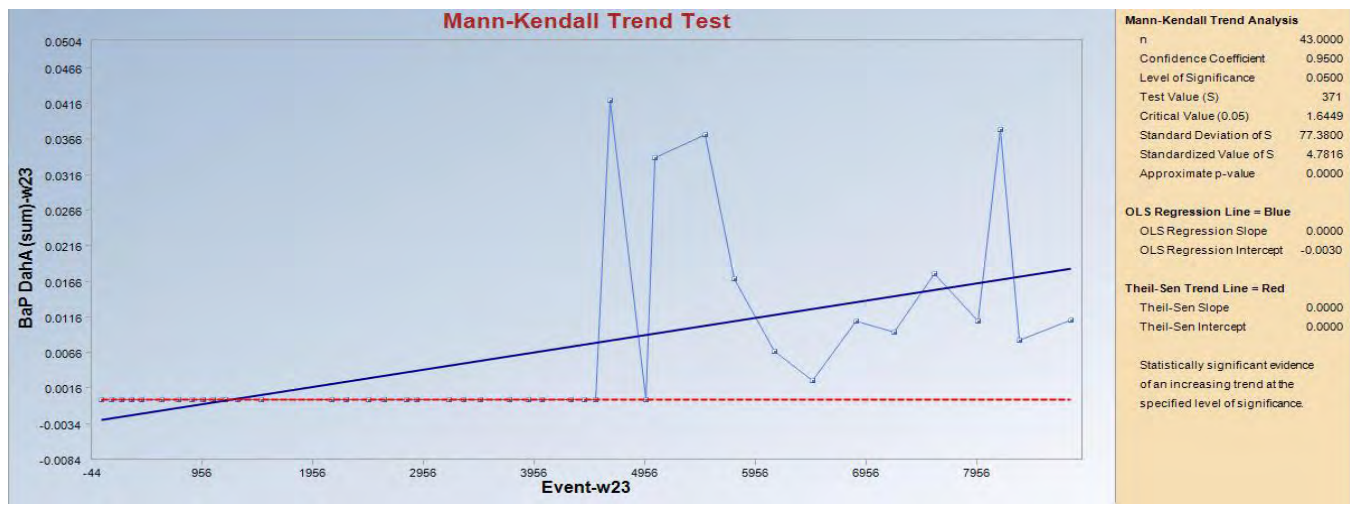
General Statistics

Number of Events	43
Number of Values	43
Minimum	0
Maximum	0.042
Mean	0.0057233
Geometric Mean	0
Median	0
Standard Deviation	0.0114604
SEM	0.0017477

Mann-Kendall Test

Test Value (S)	371
Critical Value (0.05)	1.6448536
Standard Deviation of S	77.380015
Standardized Value of S	4.7815964
Approximate p-value	8.70E-07

Statistically significant evidence of an increasing trend at the specified level of significance.



CPAH (sum) - W23

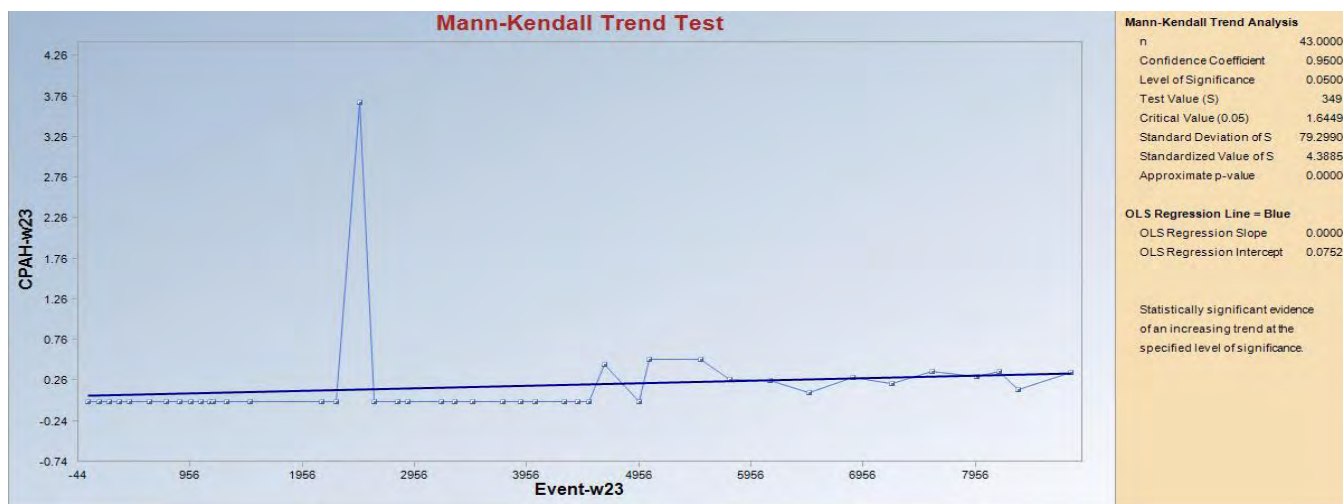
General Statistics

Number of Events	43
Number of Values	43
Minimum	0
Maximum	3.68
Mean	0.1826307
Geometric Mean	0
Median	0
Standard Deviation	0.5698497
SEM	0.0869013

Mann-Kendall Test

Test Value (S)	349
Critical Value (0.05)	1.6448536
Standard Deviation of S	79.299012
Standardized Value of S	4.3884532
Approximate p-value	5.71E-06

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W23

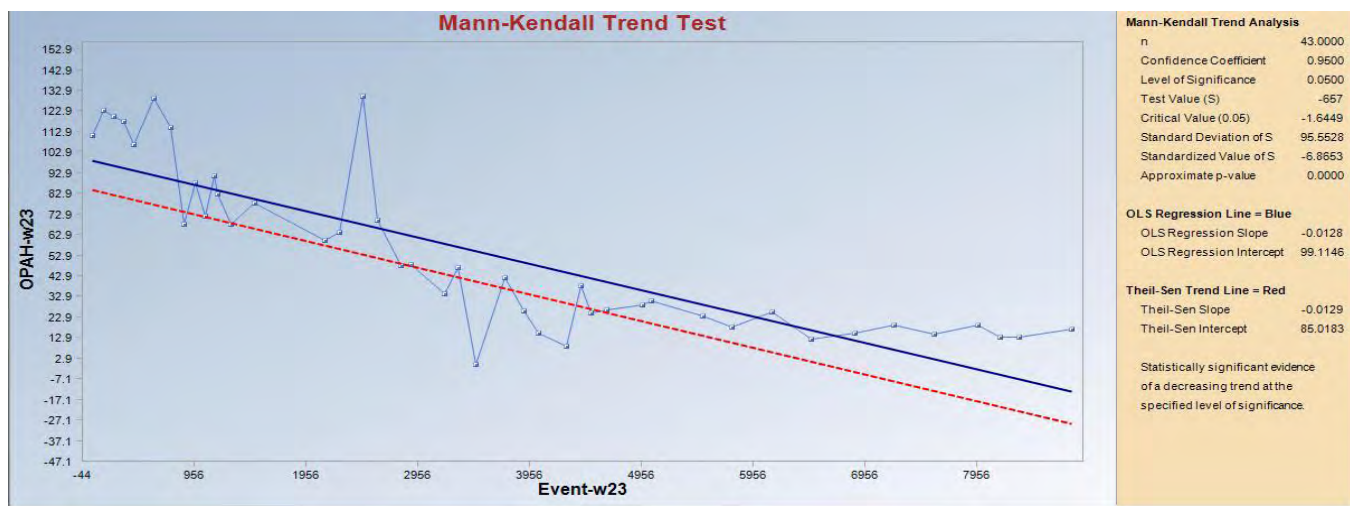
General Statistics

Number of Events	43
Number of Values	43
Minimum	0
Maximum	129.91
Mean	53.45023
Geometric Mean	0
Median	42.09
Standard Deviation	39.453944
SEM	6.01667

Mann-Kendall Test

Test Value (S)	-657
Critical Value (0.05)	-1.644854
Standard Deviation of S	95.552778
Standardized Value of S	-6.865316
Approximate p-value	3.32E-12

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W29

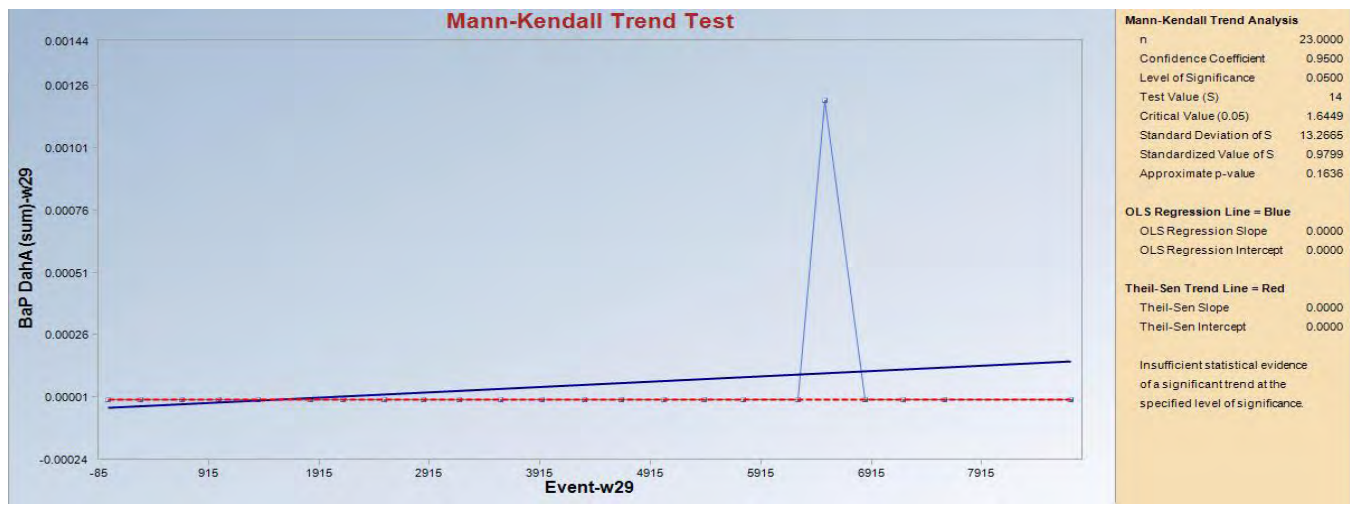
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.0012
Mean	5.22E-05
Geometric Mean	0
Median	0
Standard Deviation	2.50E-04
SEM	5.22E-05

Mann-Kendall Test

Test Value (S)	14
Critical Value (0.05)	1.6448536
Standard Deviation of S	13.266499
Standardized Value of S	0.9799119
Approximate p-value	0.1635648

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W29

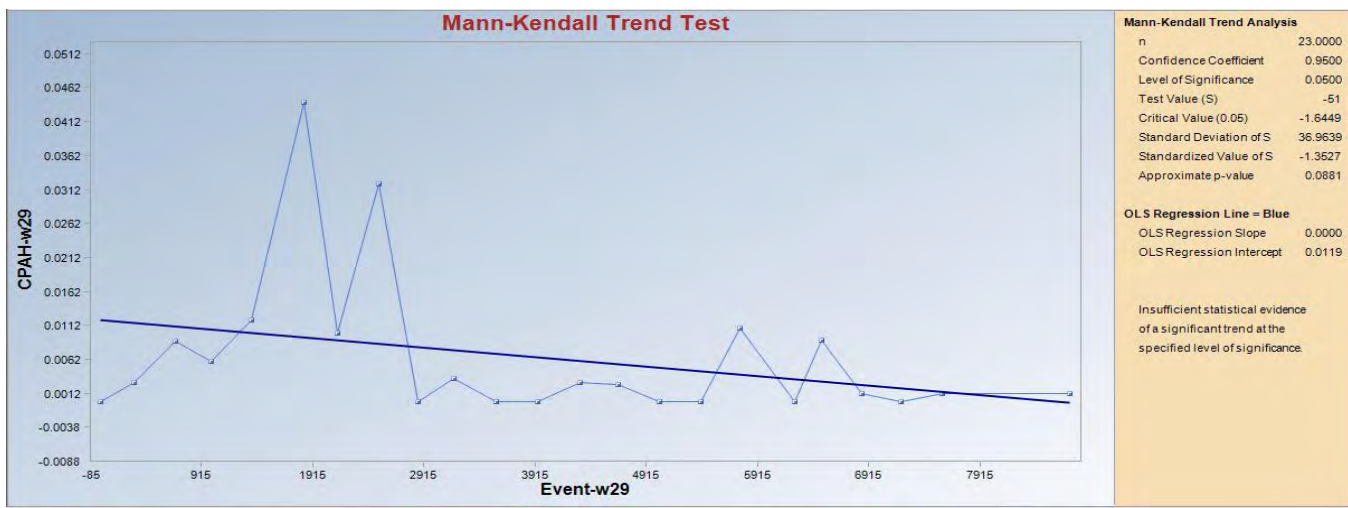
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.044
Mean	0.0064204
Geometric Mean	0
Median	0.0025
Standard Deviation	0.0108822
SEM	0.0022691

Mann-Kendall Test

Test Value (S)	-51
Critical Value (0.05)	-1.644854
Standard Deviation of S	36.963946
Standardized Value of S	-1.352669
Approximate p-value	0.0880806

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W29

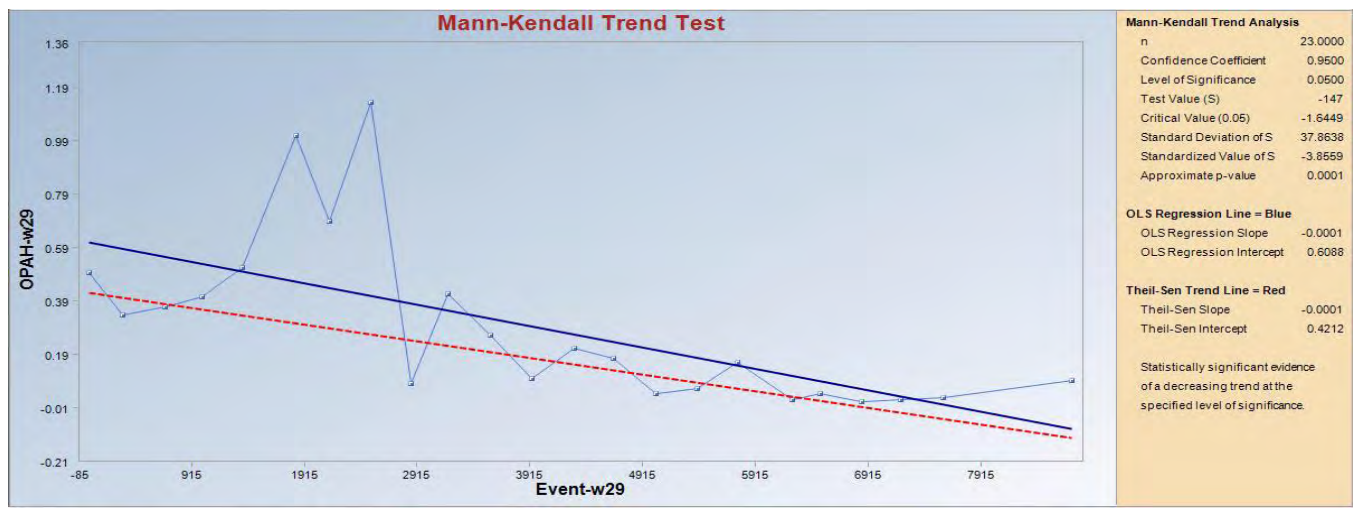
General Statistics

Number of Events	23
Number of Values	23
Minimum	0.01437
Maximum	1.132
Mean	0.2905052
Geometric Mean	0.1490665
Median	0.1754
Standard Deviation	0.3112714
SEM	0.0649046

Mann-Kendall Test

Test Value (S)	-147
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.863791
Standardized Value of S	-3.855927
Approximate p-value	5.76E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W401

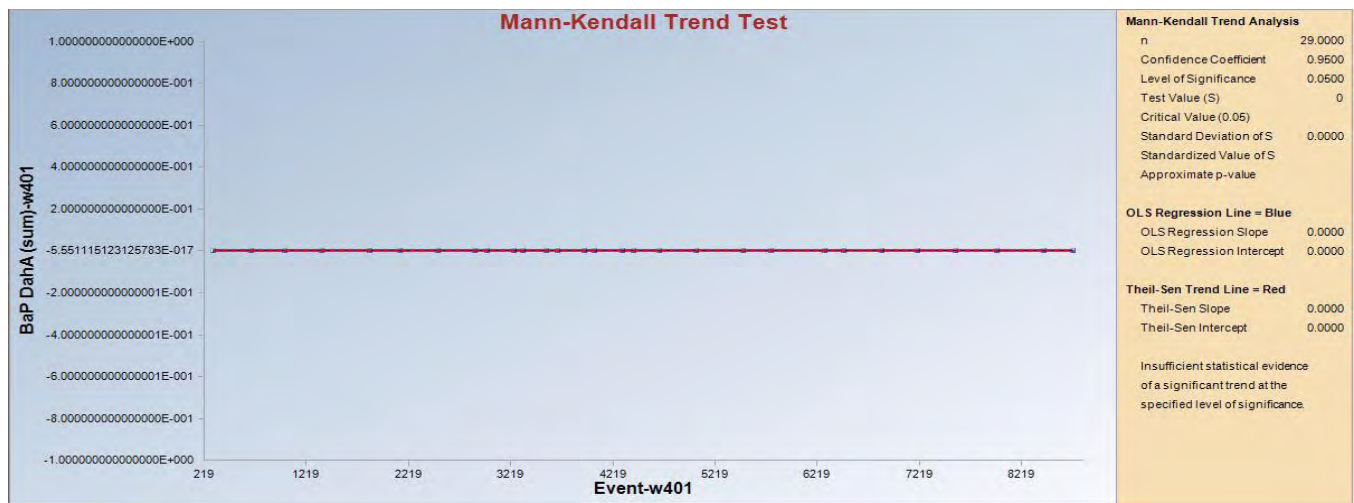
General Statistics

Number of Events	29
Number of Values	29
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W401

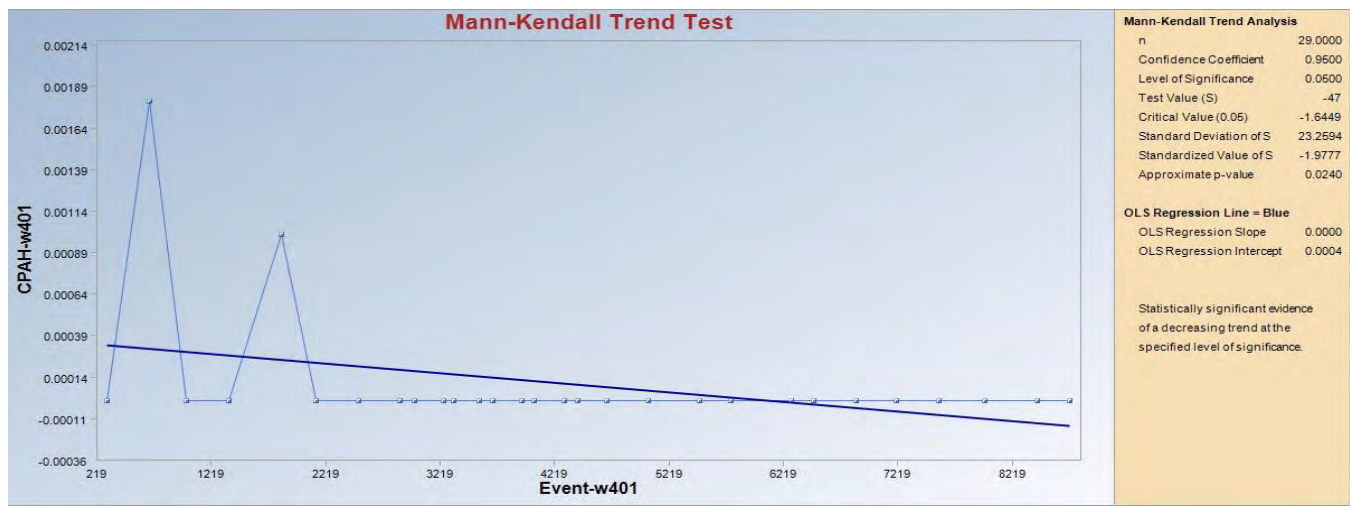
General Statistics

Number of Events	29
Number of Values	29
Minimum	0
Maximum	0.0018
Mean	9.66E-05
Geometric Mean	0
Median	0
Standard Deviation	3.77E-04
SEM	6.99E-05

Mann-Kendall Test

Test Value (S)	-47
Critical Value (0.05)	-1.644854
Standard Deviation of S	23.259407
Standardized Value of S	-1.977694
Approximate p-value	0.0239816

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W401

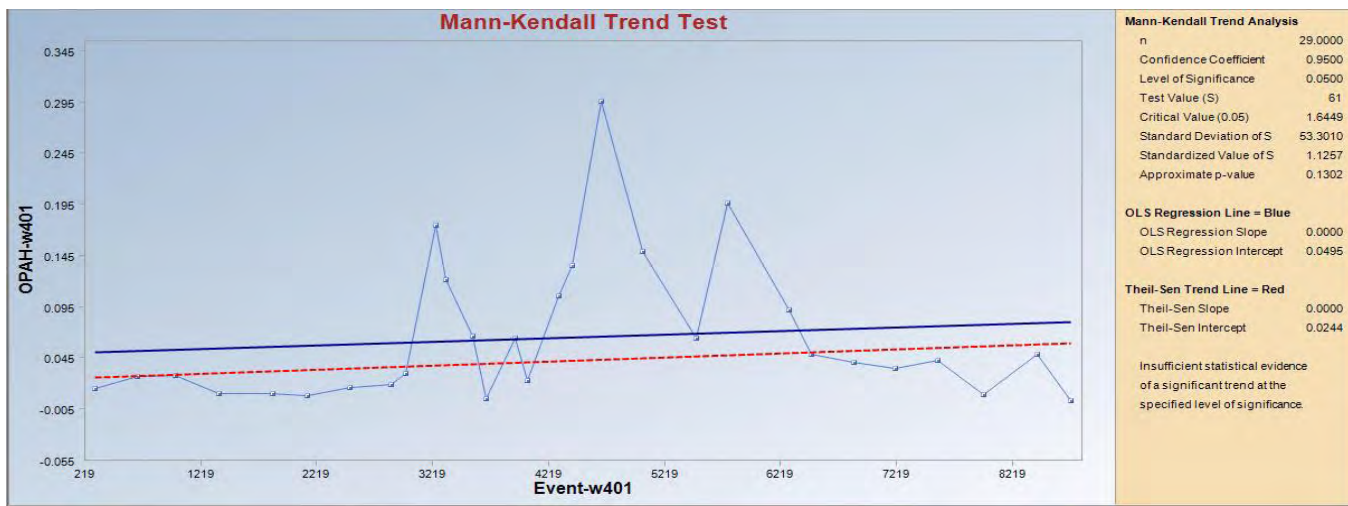
General Statistics

Number of Events	29
Number of Values	29
Minimum	0.0032
Maximum	0.2952
Mean	0.0647338
Geometric Mean	0.0366671
Median	0.04051
Standard Deviation	0.0694476
SEM	0.0128961

Mann-Kendall Test

Test Value (S)	61
Critical Value (0.05)	1.6448536
Standard Deviation of S	53.301032
Standardized Value of S	1.1256818
Approximate p-value	0.1301501

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W402

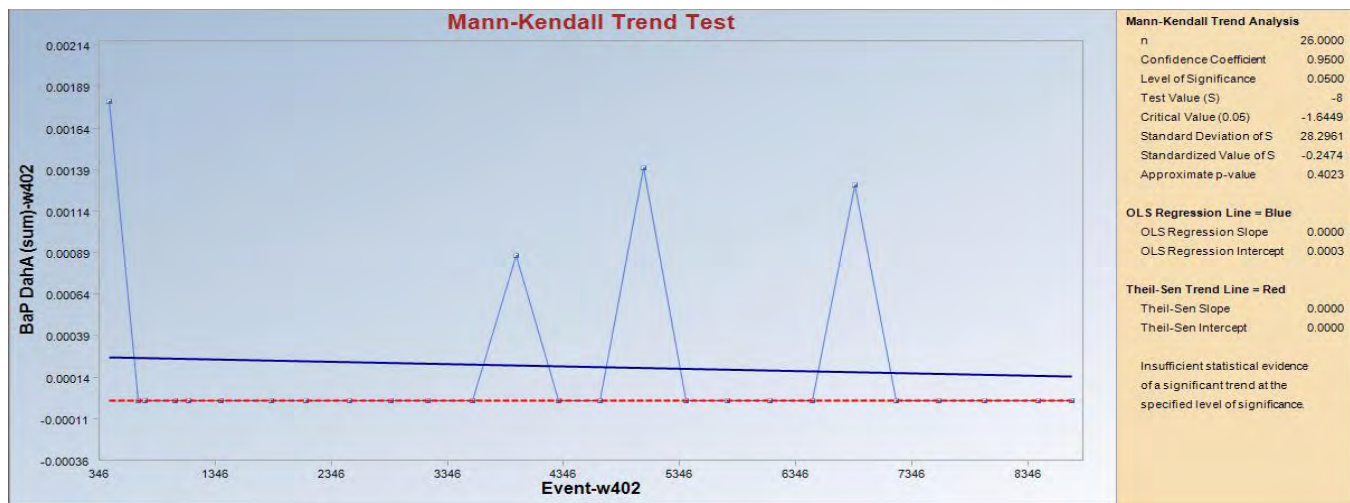
General Statistics

Number of Events	26
Number of Values	26
Minimum	0
Maximum	0.0018
Mean	2.07E-04
Geometric Mean	0
Median	0
Standard Deviation	5.11E-04
SEM	1.00E-04

Mann-Kendall Test

Test Value (S)	-8
Critical Value (0.05)	-1.644854
Standard Deviation of S	28.296054
Standardized Value of S	-0.247384
Approximate p-value	0.4023054

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W402

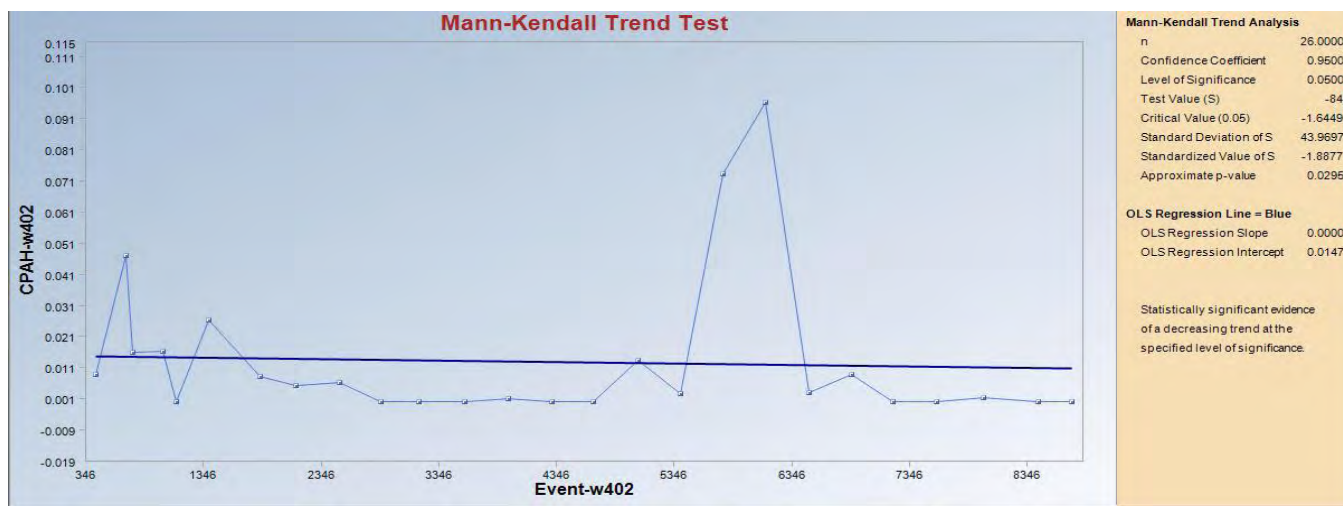
General Statistics

Number of Events	26
Number of Values	26
Minimum	0
Maximum	0.096
Mean	0.0127335
Geometric Mean	0
Median	0.00265
Standard Deviation	0.0238506
SEM	0.0046775

Mann-Kendall Test

Test Value (S)	-84
Critical Value (0.05)	-1.644854
Standard Deviation of S	43.969687
Standardized Value of S	-1.887664
Approximate p-value	0.0295355

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W402

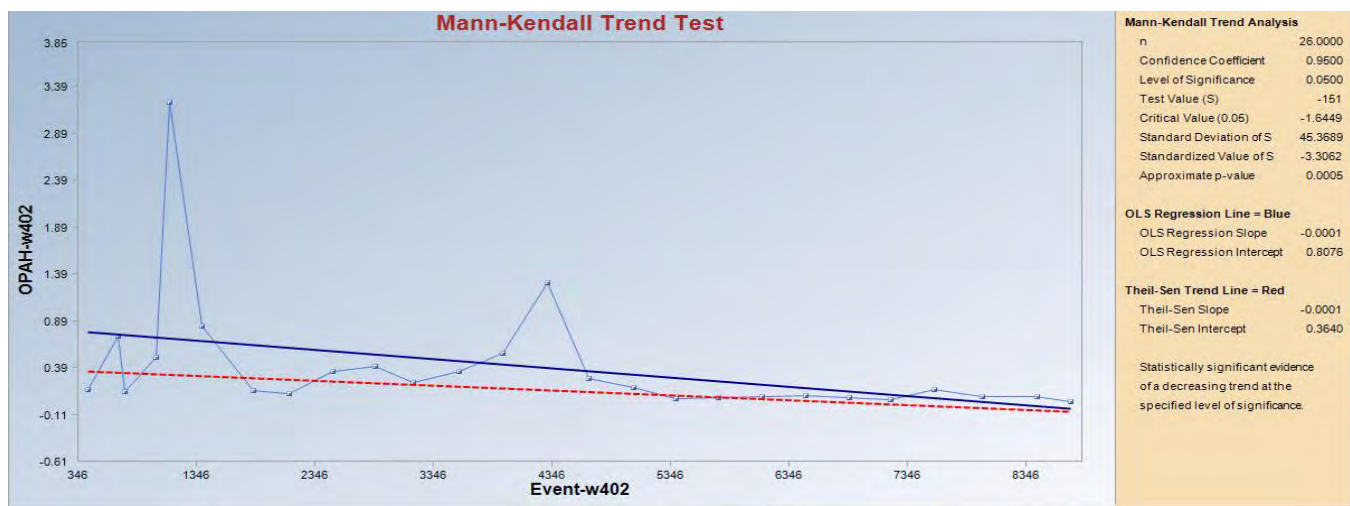
General Statistics

Number of Events	26
Number of Values	26
Minimum	0.0244
Maximum	3.215
Mean	0.3881081
Geometric Mean	0.1890209
Median	0.1502
Standard Deviation	0.6480493
SEM	0.1270929

Mann-Kendall Test

Test Value (S)	-151
Critical Value (0.05)	-1.644854
Standard Deviation of S	45.368859
Standardized Value of S	-3.306233
Approximate p-value	4.73E-04

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W403

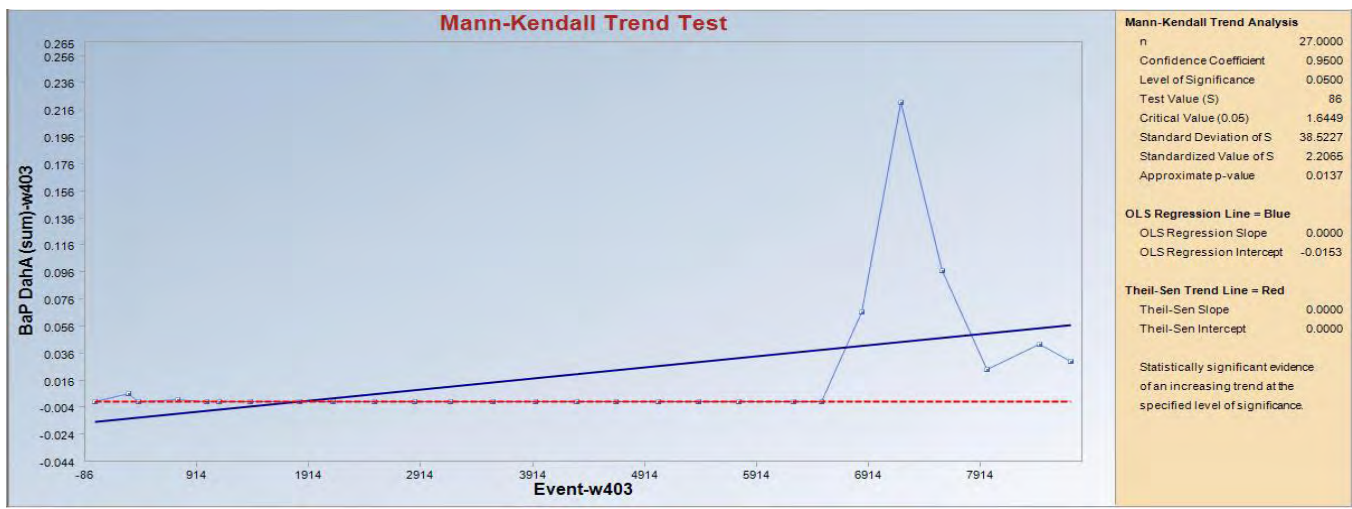
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	0.221
Mean	0.0180259
Geometric Mean	0
Median	0
Standard Deviation	0.0468856
SEM	0.0090231

Mann-Kendall Test

Test Value (S)	86
Critical Value (0.05)	1.6448536
Standard Deviation of S	38.522721
Standardized Value of S	2.2064901
Approximate p-value	0.0136749

Statistically significant evidence of an increasing trend at the specified level of significance.



CPAH (sum) - W403

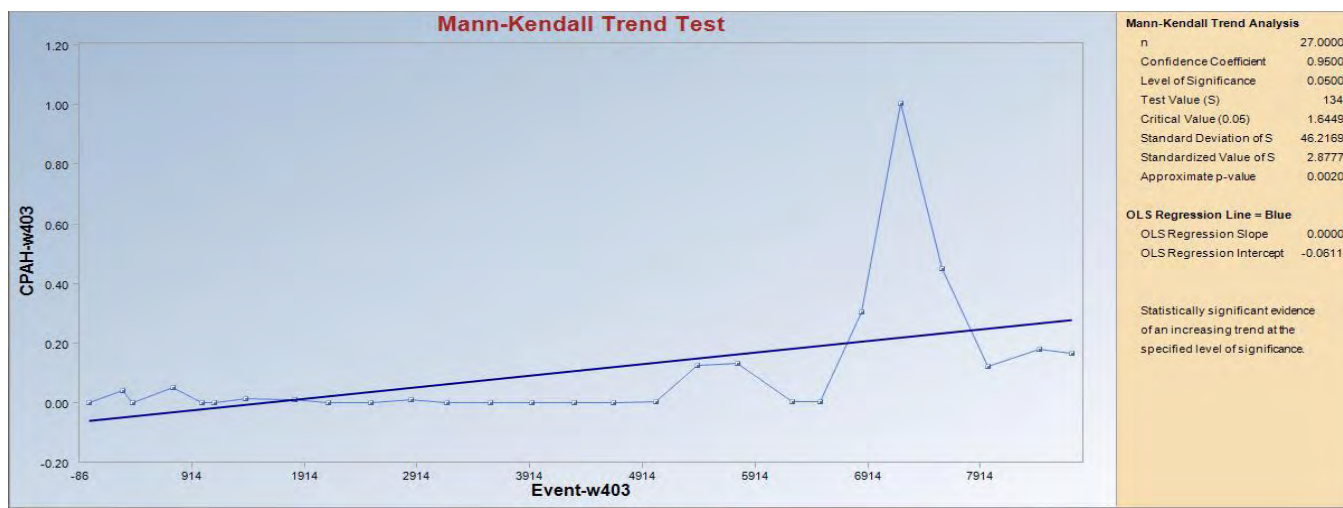
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	1.003
Mean	0.0963719
Geometric Mean	0
Median	0.00389
Standard Deviation	0.2112043
SEM	0.0406463

Mann-Kendall Test

Test Value (S)	134
Critical Value (0.05)	1.6448536
Standard Deviation of S	46.21688
Standardized Value of S	2.8777364
Approximate p-value	0.0020027

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W403

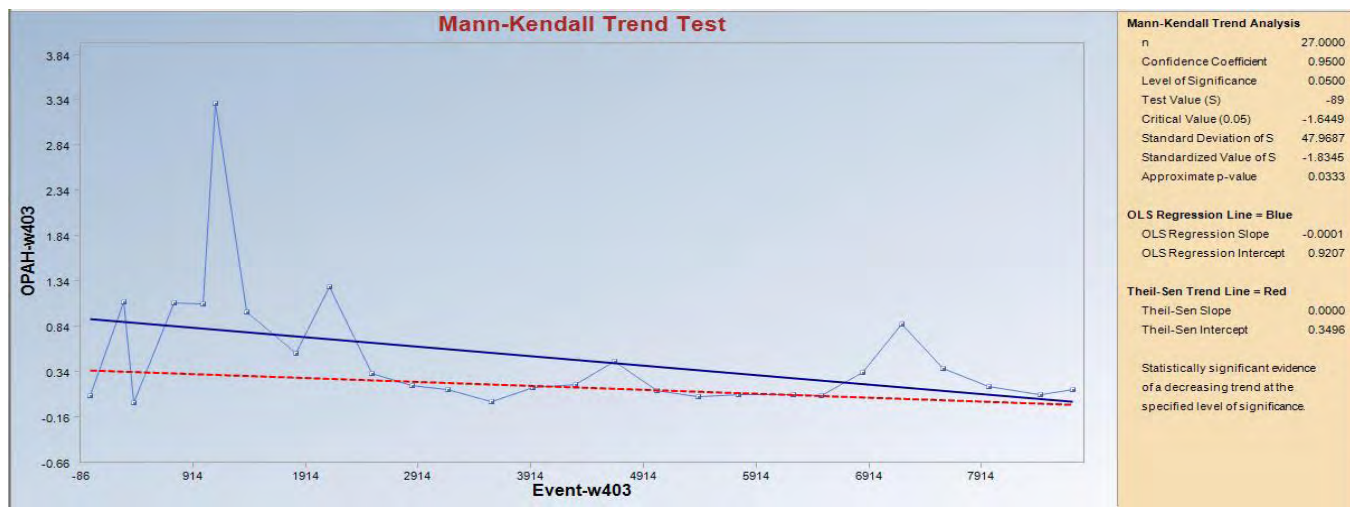
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	3.298
Mean	0.4958163
Geometric Mean	0
Median	0.1818
Standard Deviation	0.6884913
SEM	0.1325002

Mann-Kendall Test

Test Value (S)	-89
Critical Value (0.05)	-1.644854
Standard Deviation of S	47.96874
Standardized Value of S	-1.834528
Approximate p-value	0.0332878

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W406

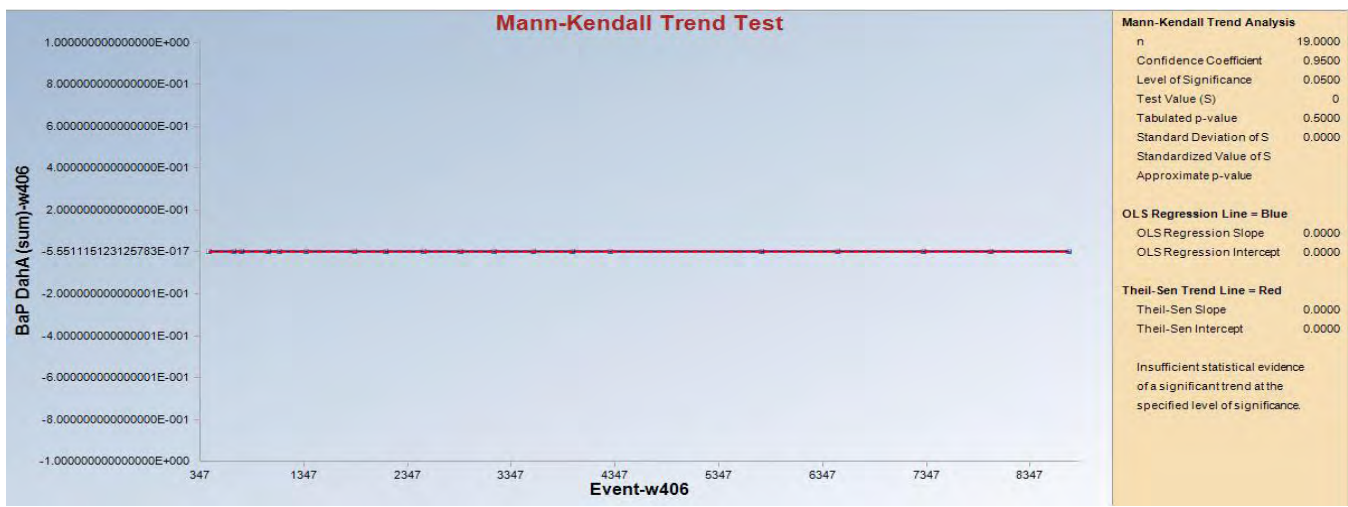
General Statistics

Number of Events	19
Number of Values	19
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.5
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W406

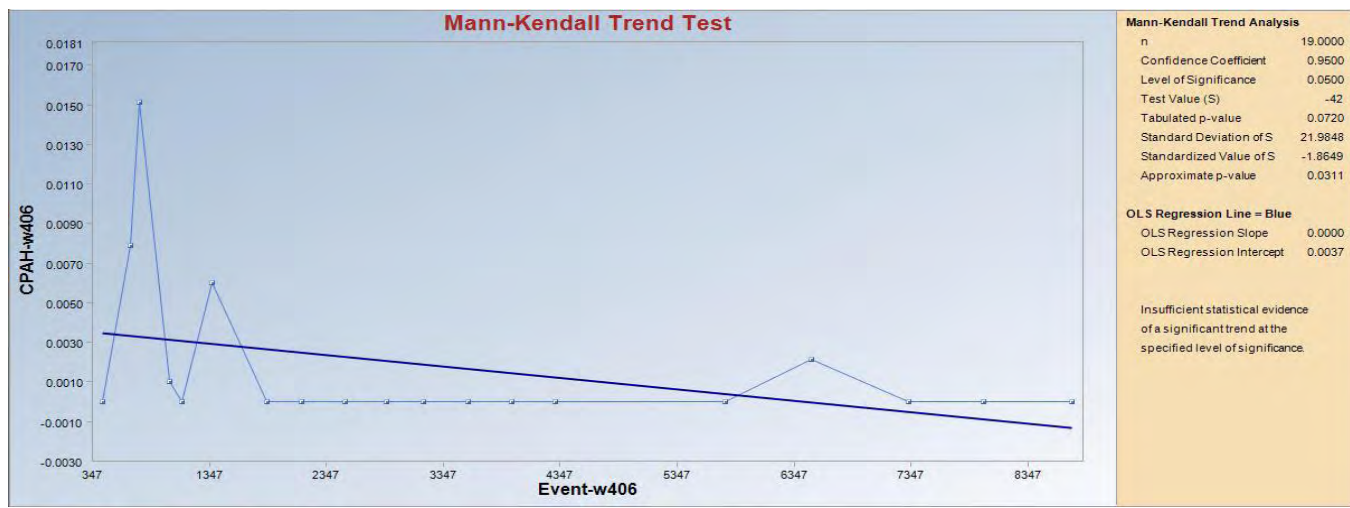
General Statistics

Number of Events	19
Number of Values	19
Minimum	0
Maximum	0.0151
Mean	0.00169
Geometric Mean	0
Median	0
Standard Deviation	0.0039272
SEM	9.01E-04

Mann-Kendall Test

Test Value (S)	-42
Tabulated p-value	0.072
Standard Deviation of S	21.984843
Standardized Value of S	-1.864921
Approximate p-value	0.0310962

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W406

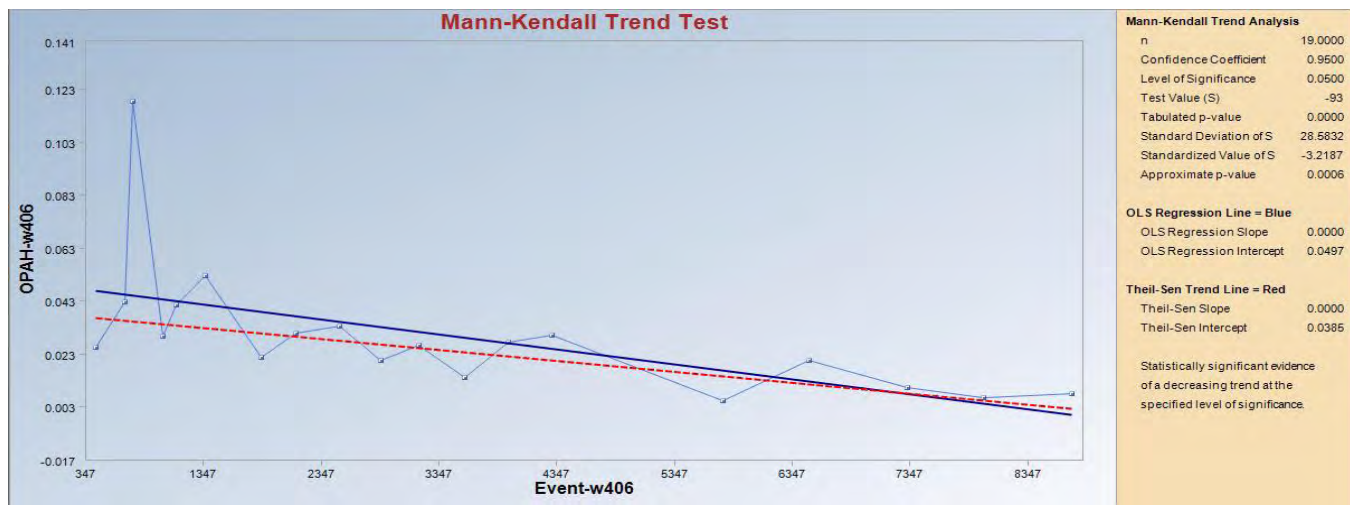
General Statistics

Number of Events	19
Number of Values	19
Minimum	0.00575
Maximum	0.1186
Mean	0.0300721
Geometric Mean	0.0233528
Median	0.0267
Standard Deviation	0.024914
SEM	0.0057157

Mann-Kendall Test

Test Value (S)	-93
Tabulated p-value	0
Standard Deviation of S	28.583212
Standardized Value of S	-3.218673
Approximate p-value	6.44E-04

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W48

General Statistics

Number of Events	61
Number of Values	60
Minimum	0
Maximum	0.0012
Mean	2.00E-05
Geometric Mean	0
Median	0
Standard Deviation	1.55E-04
SEM	2.00E-05

Mann-Kendall Test

Test Value (S)	57
Critical Value (0.05)	1.6448536
Standard Deviation of S	34.636205
Standardized Value of S	1.6168053
Approximate p-value	0.0529602

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - W48

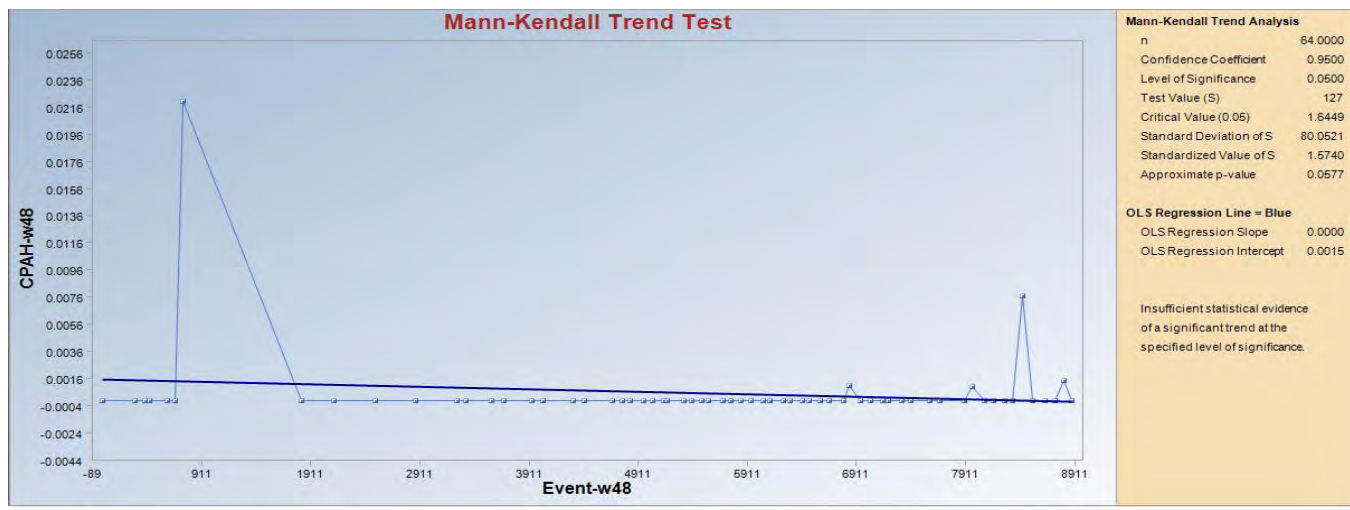
General Statistics

Number of Events	64
Number of Values	64
Minimum	0
Maximum	0.022
Mean	5.21E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0029017
SEM	3.63E-04

Mann-Kendall Test

Test Value (S)	127
Critical Value (0.05)	1.6448536
Standard Deviation of S	80.052066
Standardized Value of S	1.5739756
Approximate p-value	0.0577465

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W48

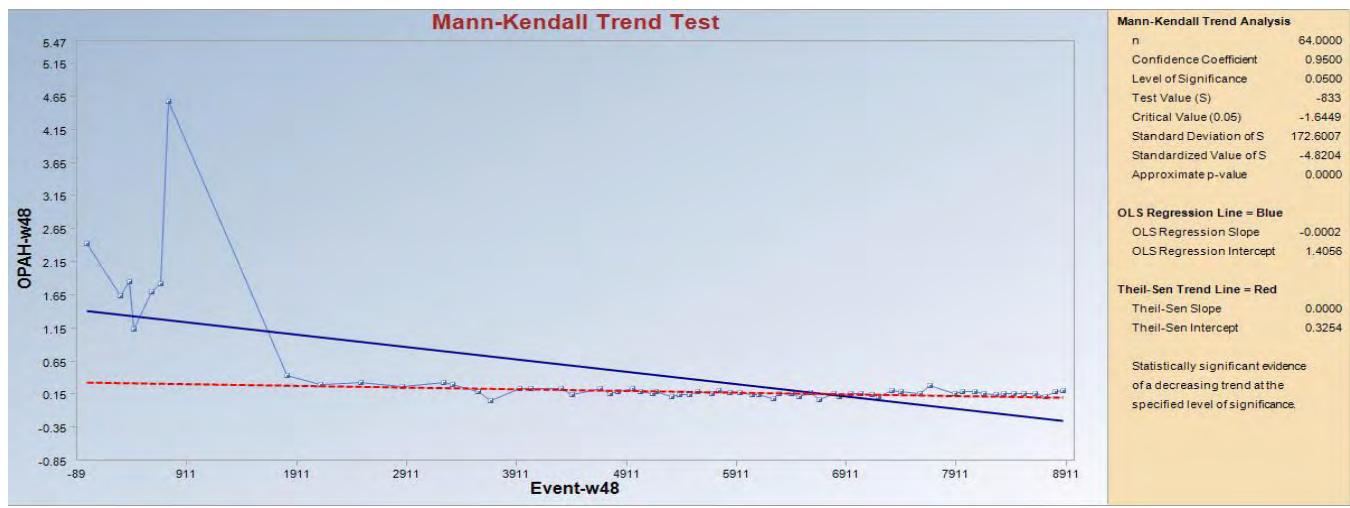
General Statistics

Number of Events	64
Number of Values	64
Minimum	0.0496
Maximum	4.566
Mean	0.3920875
Geometric Mean	0.2153036
Median	0.170605
Standard Deviation	0.7166296
SEM	0.0895787

Mann-Kendall Test

Test Value (S)	-833
Critical Value (0.05)	-1.644854
Standard Deviation of S	172.6007
Standardized Value of S	-4.820375
Approximate p-value	7.16E-07

Statistically significant evidence of a decreasing trend at the specified level of significance.



Summary of Statistical PAH Trends

St. Peter					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
W122	Monitoring		No Change	Decreasing	Decreasing
W129	Monitoring		No Change	No Change	No Change
W14	Monitoring		No Change	No Change	No Change
W24	Monitoring		No Change	No Change	Decreasing
W33R	Monitoring		No Change	No Change	Decreasing
W408	Monitoring		No Change	No Change	Decreasing
W409	Monitoring		No Change	Decreasing	No Change
W410	Pumping		No Change	No Change	Increasing
W411	Monitoring		No Change	No Change	Decreasing
W412	Monitoring		No Change	No Change	Decreasing
W414	Monitoring		No Change	No Change	No Change

BaP DahA (sum) - W122

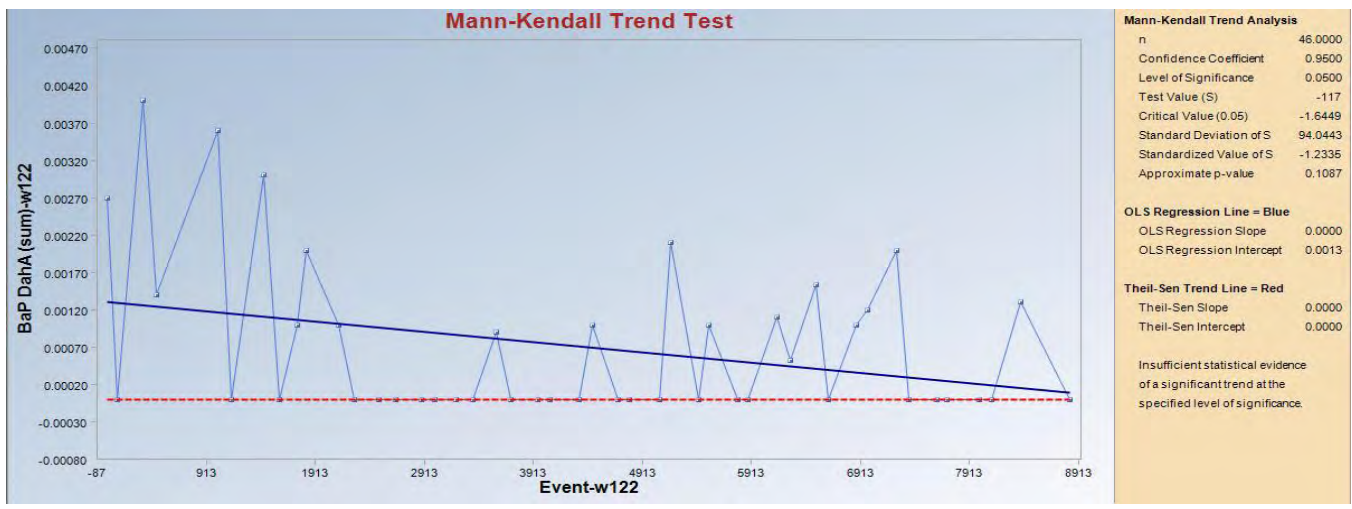
General Statistics

Number of Events	46
Number of Values	46
Minimum	0
Maximum	0.004
Mean	7.03E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0010501
SEM	1.55E-04

Mann-Kendall Test

Test Value (S)	-117
Critical Value (0.05)	-1.644854
Standard Deviation of S	94.044316
Standardized Value of S	-1.233461
Approximate p-value	0.1087019

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W122

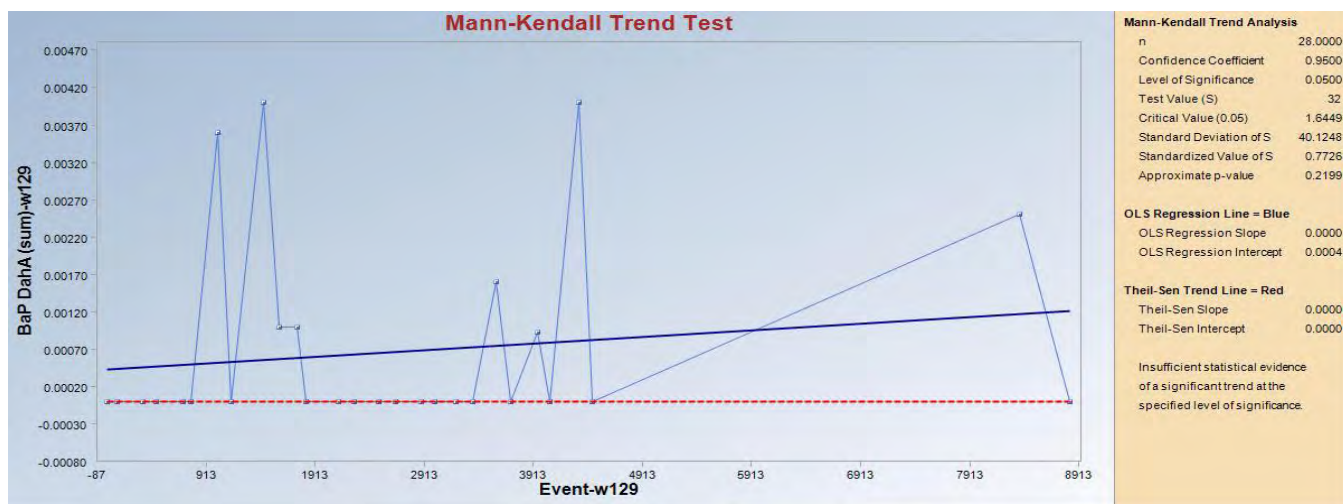
General Statistics

Number of Events	46
Number of Values	46
Minimum	0
Maximum	0.0995
Mean	0.0139063
Geometric Mean	0
Median	0.006245
Standard Deviation	0.0204738
SEM	0.0030187

Mann-Kendall Test

Test Value (S)	-249
Critical Value (0.05)	-1.644854
Standard Deviation of S	104.59605
Standardized Value of S	-2.371026
Approximate p-value	0.0088694

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W122

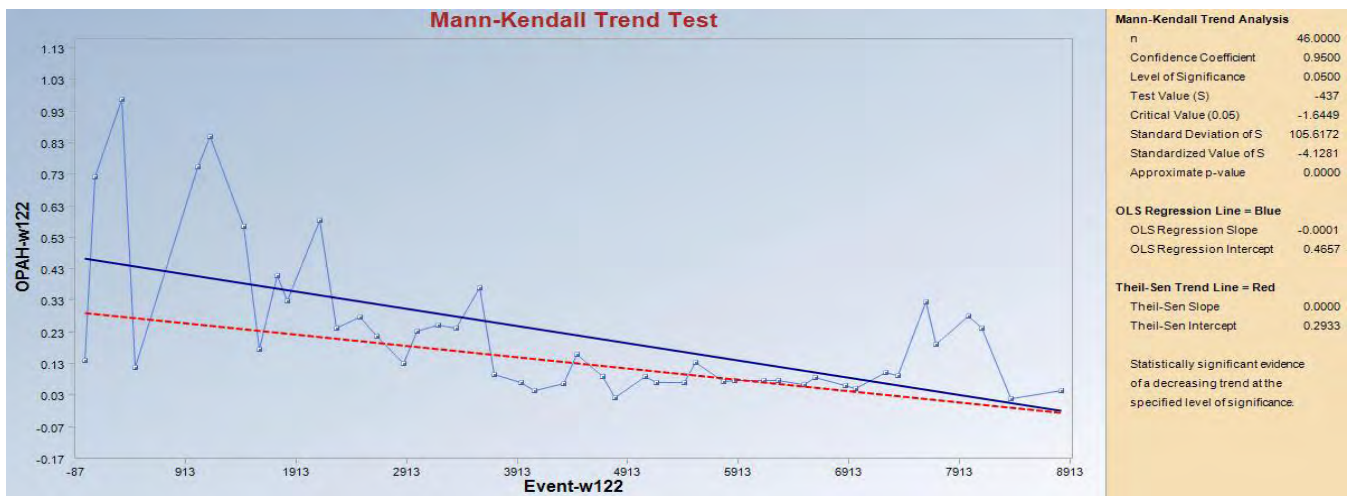
General Statistics

Number of Events	46
Number of Values	46
Minimum	0.02183
Maximum	0.9688
Mean	0.2271696
Geometric Mean	0.1495433
Median	0.1349
Standard Deviation	0.2291922
SEM	0.0337926

Mann-Kendall Test

Test Value (S)	-437
Critical Value (0.05)	-1.644854
Standard Deviation of S	105.61723
Standardized Value of S	-4.128114
Approximate p-value	1.83E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum)- W129

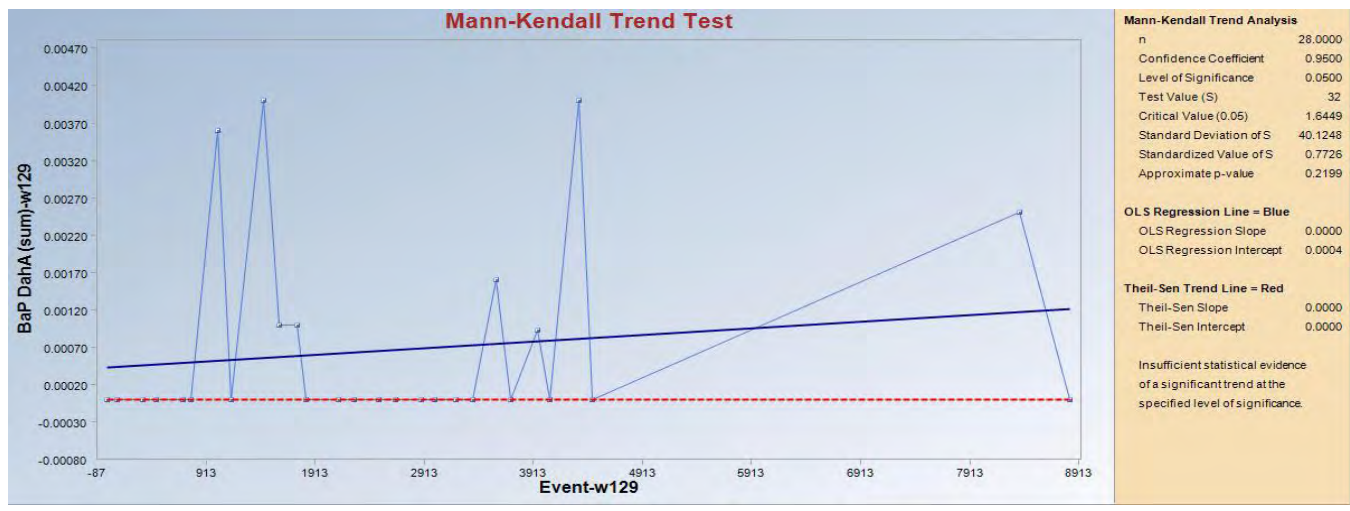
General Statistics

Number of Events	28
Number of Values	28
Minimum	0
Maximum	0.004
Mean	6.65E-04
Geometric Mean	0
Median	0
Standard Deviation	0.00128
SEM	2.42E-04

Mann-Kendall Test

Test Value (S)	32
Critical Value (0.05)	1.6448536
Standard Deviation of S	40.124805
Standardized Value of S	0.7725894
Approximate p-value	0.2198827

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W129

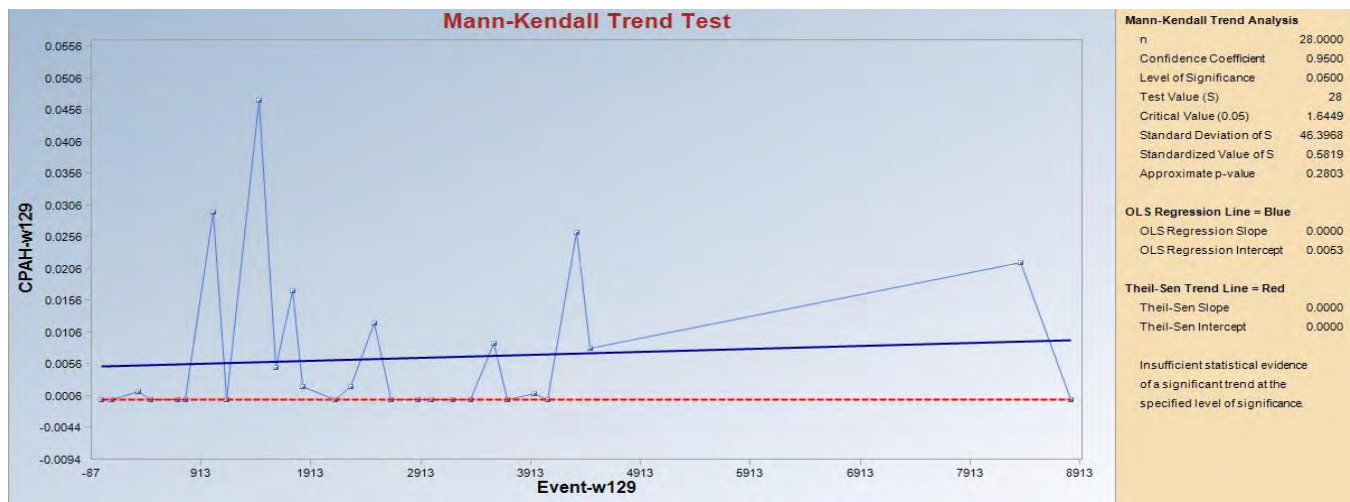
General Statistics

Number of Events	28
Number of Values	28
Minimum	0
Maximum	0.047
Mean	0.0064696
Geometric Mean	0
Median	0
Standard Deviation	0.0116525
SEM	0.0022021

Mann-Kendall Test

Test Value (S)	28
Critical Value (0.05)	1.6448536
Standard Deviation of S	46.396839
Standardized Value of S	0.5819362
Approximate p-value	0.2803048

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W129

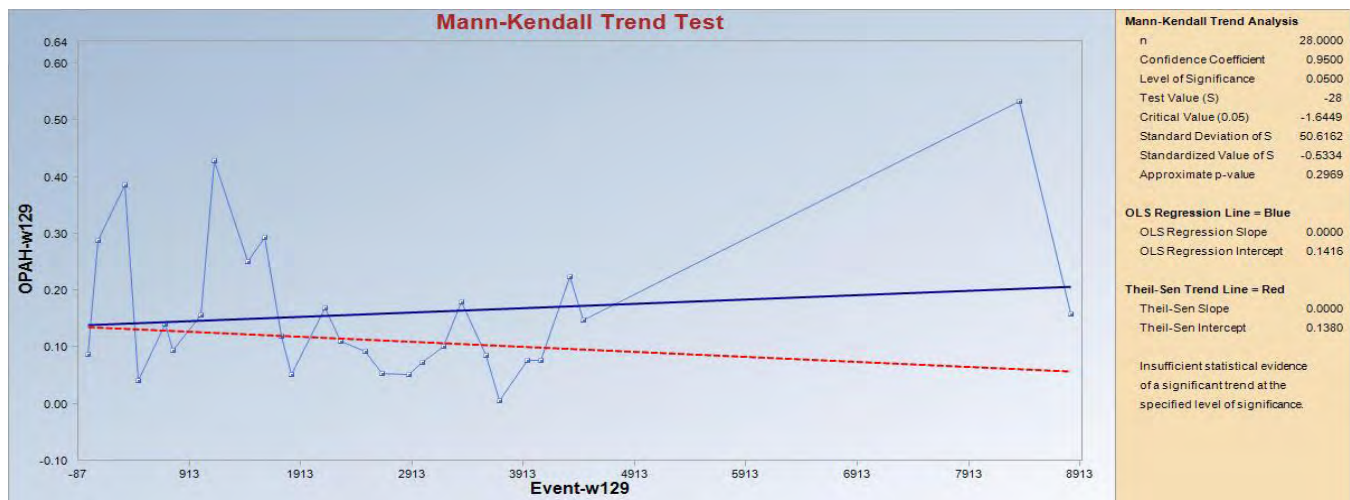
General Statistics

Number of Events	28
Number of Values	28
Minimum	0.0081
Maximum	0.5347
Mean	0.1617479
Geometric Mean	0.1204554
Median	0.1165
Standard Deviation	0.126359
SEM	0.0238796

Mann-Kendall Test

Test Value (S)	-28
Critical Value (0.05)	-1.644854
Standard Deviation of S	50.616203
Standardized Value of S	-0.533426
Approximate p-value	0.2968694

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W14

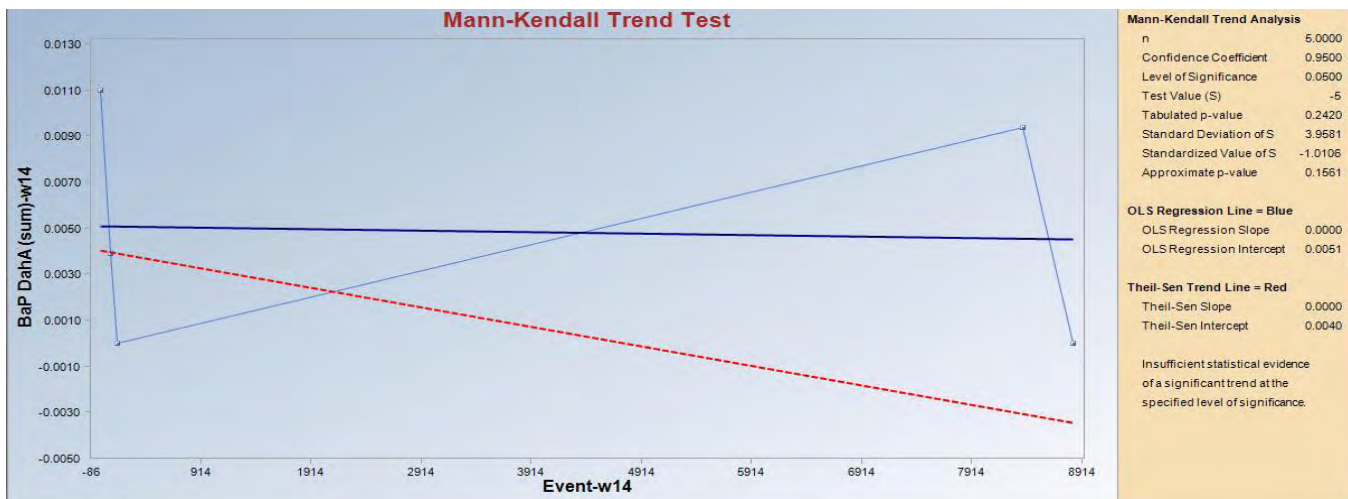
General Statistics

Number of Events	5
Number of Values	5
Minimum	0
Maximum	0.011
Mean	0.00486
Geometric Mean	0
Median	0.0039
Standard Deviation	0.0051593
SEM	0.0023073

Mann-Kendall Test

Test Value (S)	-5
Tabulated p-value	0.242
Standard Deviation of S	3.958114
Standardized Value of S	-1.010582
Approximate p-value	0.1561082

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W14

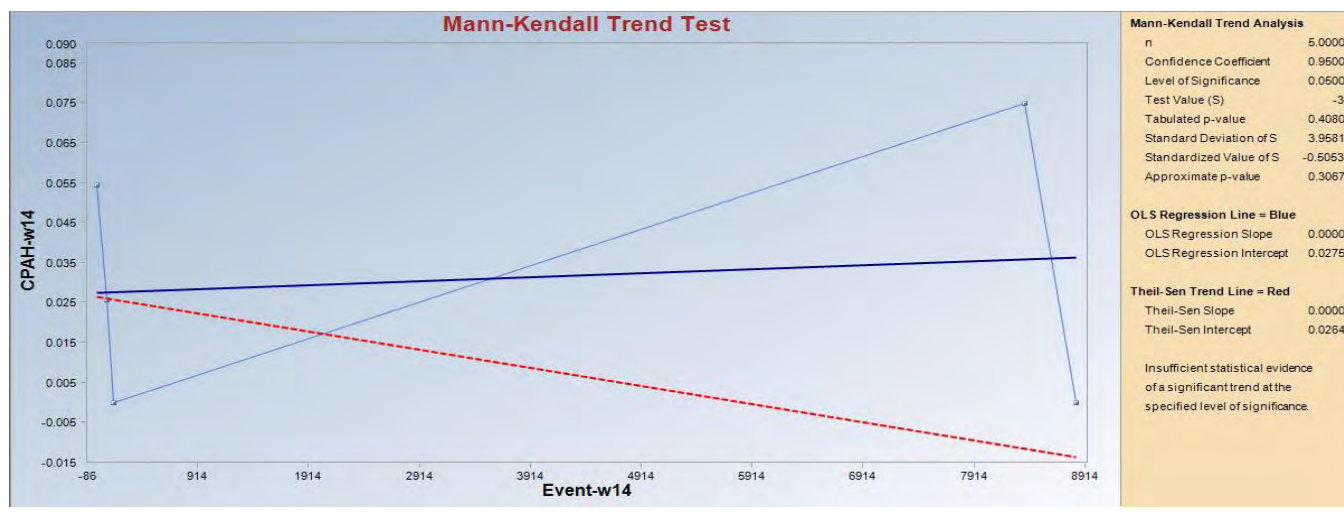
General Statistics

Number of Events	5
Number of Values	5
Minimum	0
Maximum	0.0748
Mean	0.03098
Geometric Mean	0
Median	0.0257
Standard Deviation	0.0332268
SEM	0.0148595

Mann-Kendall Test

Test Value (S)	-3
Tabulated p-value	0.408
Standard Deviation of S	3.958114
Standardized Value of S	-0.505291
Approximate p-value	0.3066772

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W14

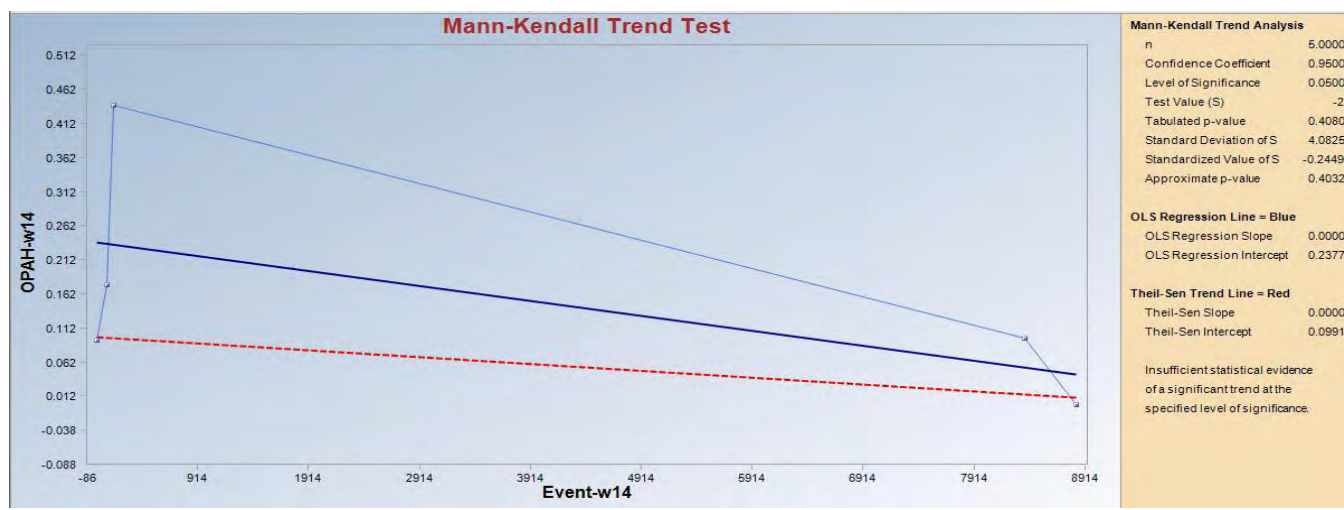
General Statistics

Number of Events	5
Number of Values	5
Minimum	0
Maximum	0.4384
Mean	0.16114
Geometric Mean	0
Median	0.0975
Standard Deviation	0.1669689
SEM	0.0746708

Mann-Kendall Test

Test Value (S)	-2
Tabulated p-value	0.408
Standard Deviation of S	4.0824829
Standardized Value of S	-0.244949
Approximate p-value	0.403248

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W24

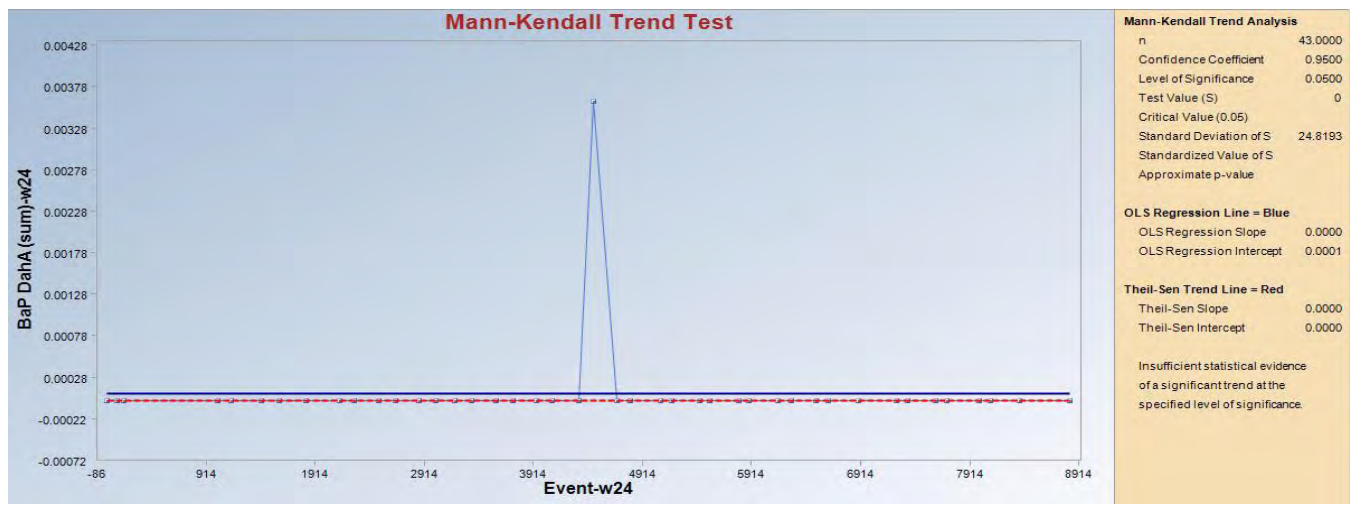
General Statistics

Number of Events	43
Number of Values	43
Minimum	0
Maximum	0.0036
Mean	8.37E-05
Geometric Mean	0
Median	0
Standard Deviation	5.49E-04
SEM	8.37E-05

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	24.819347
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W24

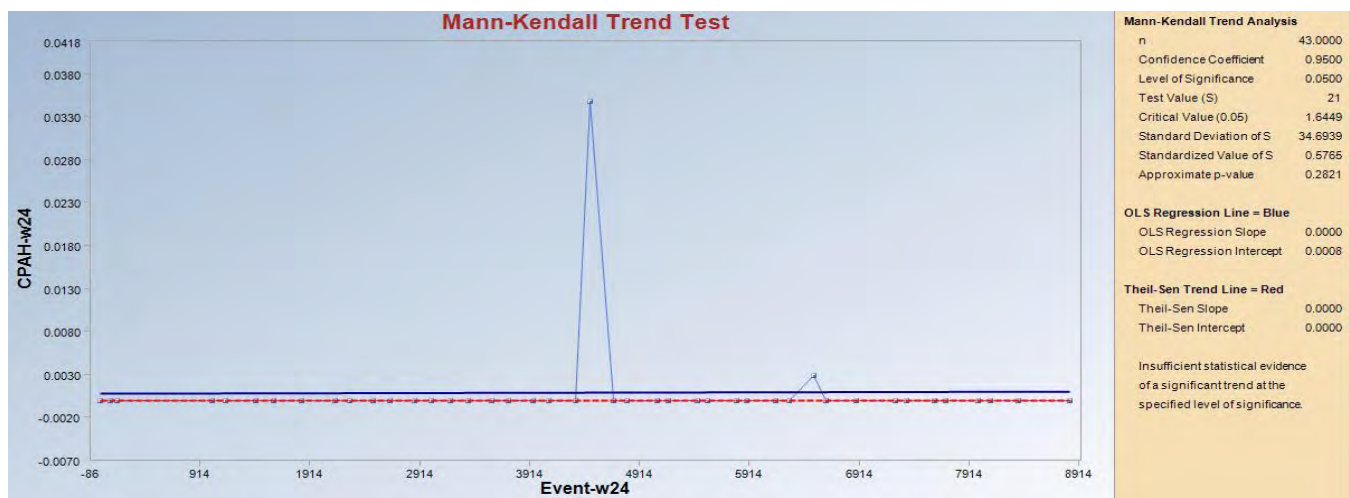
General Statistics

Number of Events	43
Number of Values	43
Minimum	0
Maximum	0.0348
Mean	8.76E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0053147
SEM	8.10E-04

Mann-Kendall Test

Test Value (S)	21
Critical Value (0.05)	1.6448536
Standard Deviation of S	34.6939
Standardized Value of S	0.5764702
Approximate p-value	0.2821487

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W24

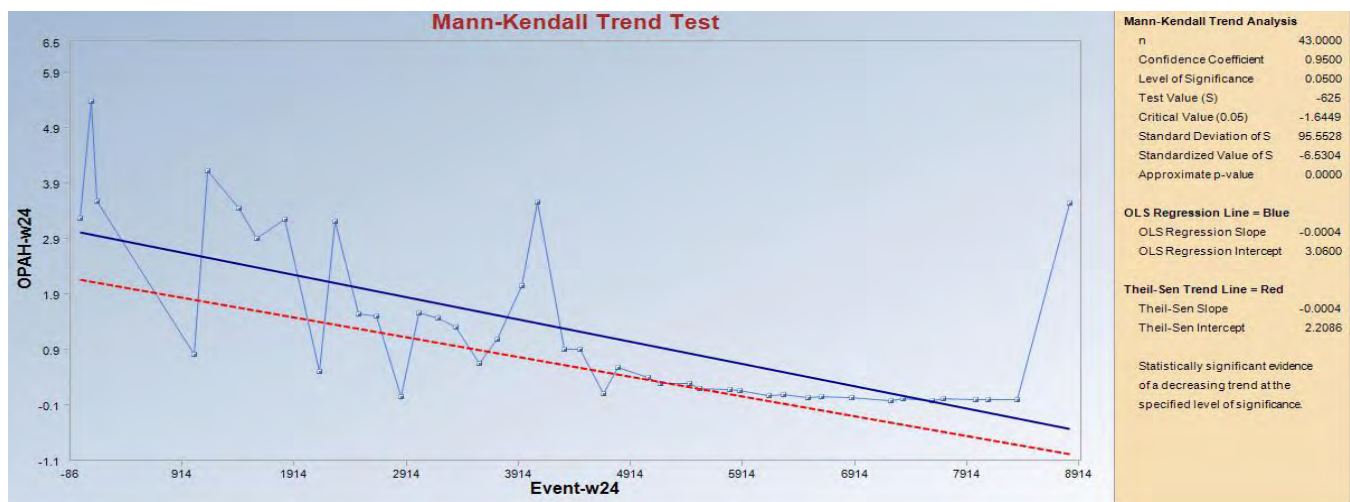
General Statistics

Number of Events	43
Number of Values	43
Minimum	0.02423
Maximum	5.41
Mean	1.2733686
Geometric Mean	0.4643353
Median	0.6192
Standard Deviation	1.4667283
SEM	0.223674

Mann-Kendall Test

Test Value (S)	-625
Critical Value (0.05)	-1.644854
Standard Deviation of S	95.552778
Standardized Value of S	-6.530422
Approximate p-value	3.28E-11

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W33r

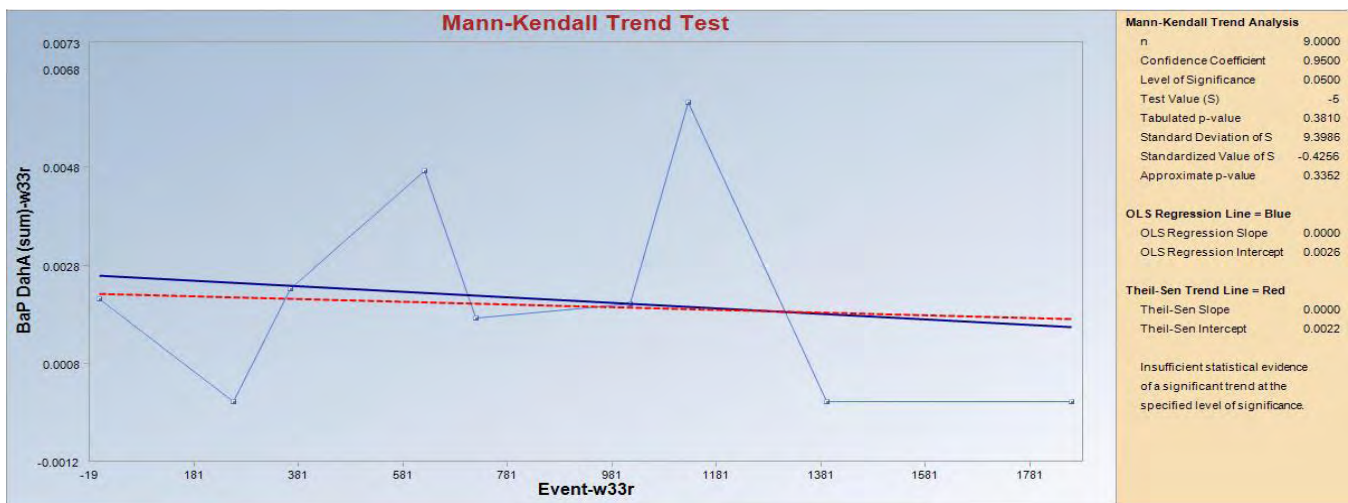
General Statistics

Number of Events	9
Number of Values	9
Minimum	0
Maximum	0.0061
Mean	0.0021
Geometric Mean	0
Median	0.002
Standard Deviation	0.0021272
SEM	7.09E-04

Mann-Kendall Test

Test Value (S)	-5
Tabulated p-value	0.381
Standard Deviation of S	9.3985815
Standardized Value of S	-0.425596
Approximate p-value	0.3352011

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W33r

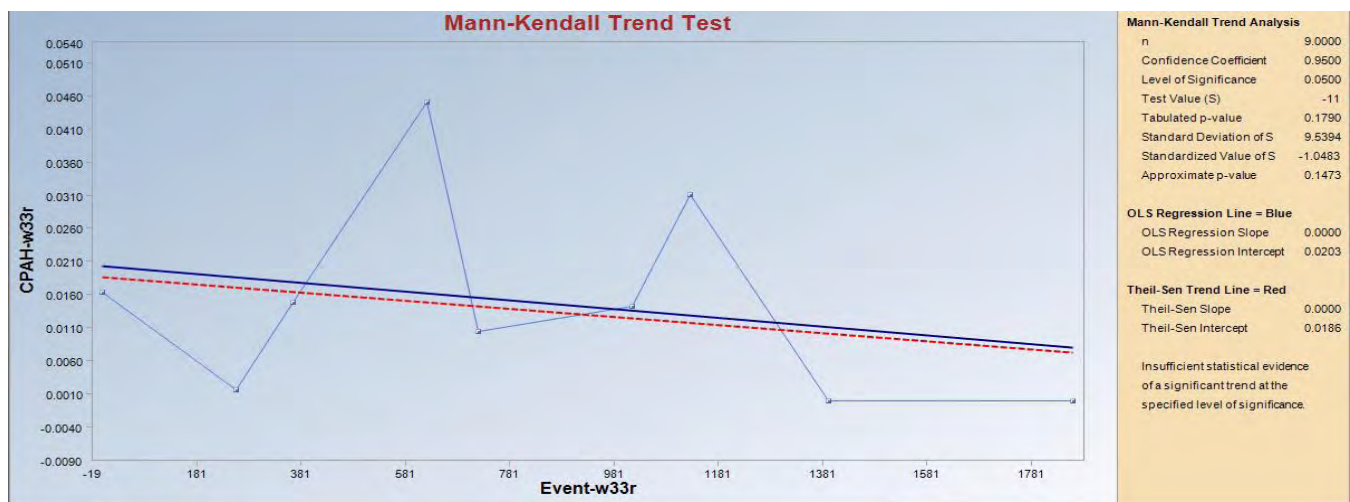
General Statistics

Number of Events	9
Number of Values	9
Minimum	0
Maximum	0.045
Mean	0.0148556
Geometric Mean	0
Median	0.0142
Standard Deviation	0.0150476
SEM	0.0050159

Mann-Kendall Test

Test Value (S)	-11
Tabulated p-value	0.179
Standard Deviation of S	9.539392
Standardized Value of S	-1.048285
Approximate p-value	0.1472537

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W33r

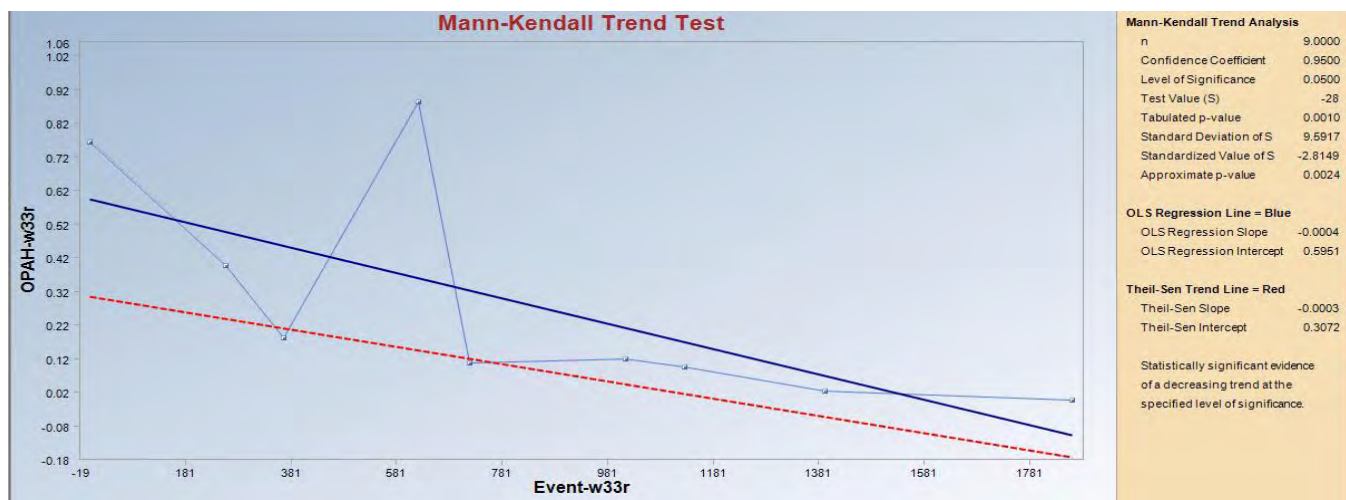
General Statistics

Number of Events	9
Number of Values	9
Minimum	0
Maximum	0.885
Mean	0.2874033
Geometric Mean	0
Median	0.122
Standard Deviation	0.3272223
SEM	0.1090741

Mann-Kendall Test

Test Value (S)	-28
Tabulated p-value	0.001
Standard Deviation of S	9.591663
Standardized Value of S	-2.814945
Approximate p-value	0.0024393

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W408

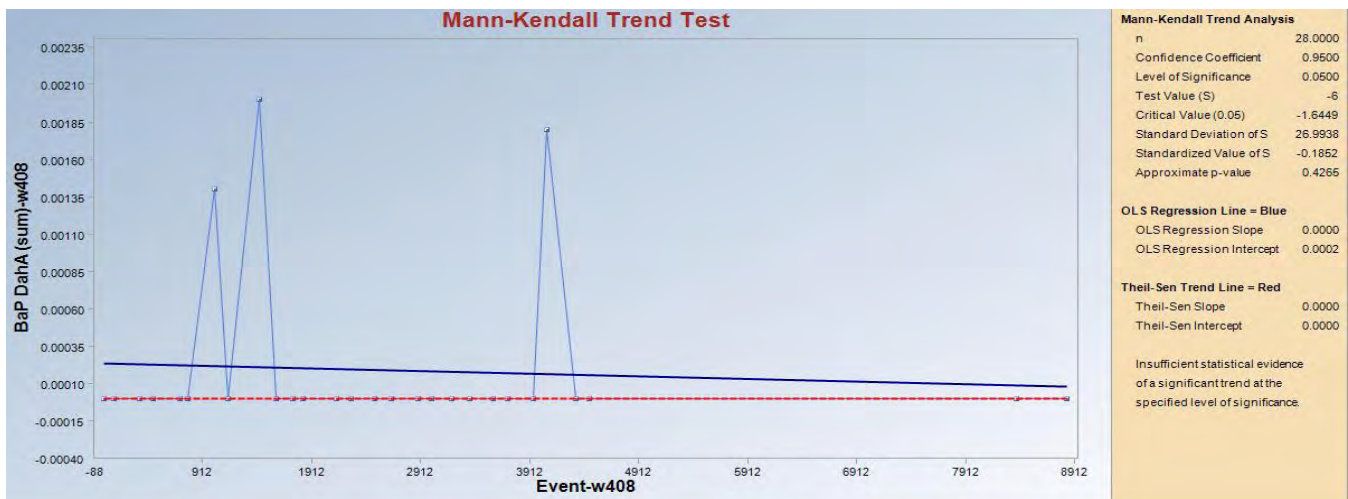
General Statistics

Number of Events	28
Number of Values	28
Minimum	0
Maximum	0.002
Mean	1.86E-04
Geometric Mean	0
Median	0
Standard Deviation	5.52E-04
SEM	1.04E-04

Mann-Kendall Test

Test Value (S)	-6
Critical Value (0.05)	-1.644854
Standard Deviation of S	26.993826
Standardized Value of S	-0.185228
Approximate p-value	0.4265253

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W408

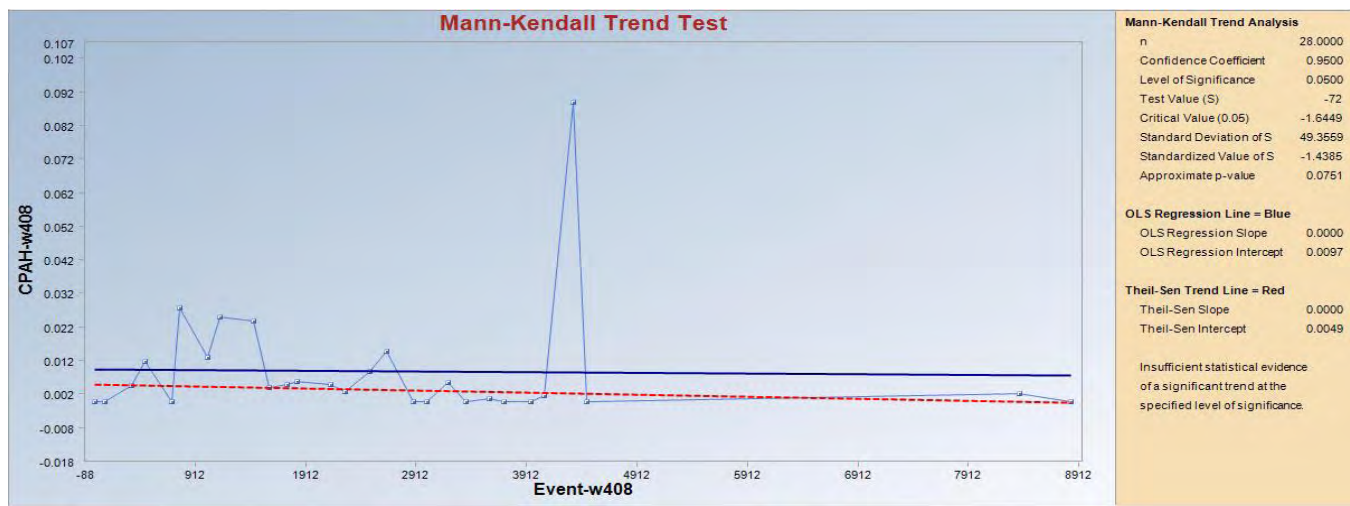
General Statistics

Number of Events	28
Number of Values	28
Minimum	0
Maximum	0.089
Mean	0.0090407
Geometric Mean	0
Median	0.0035
Standard Deviation	0.0176393
SEM	0.0033335

Mann-Kendall Test

Test Value (S)	-72
Critical Value (0.05)	-1.644854
Standard Deviation of S	49.355851
Standardized Value of S	-1.438533
Approximate p-value	0.0751415

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W408

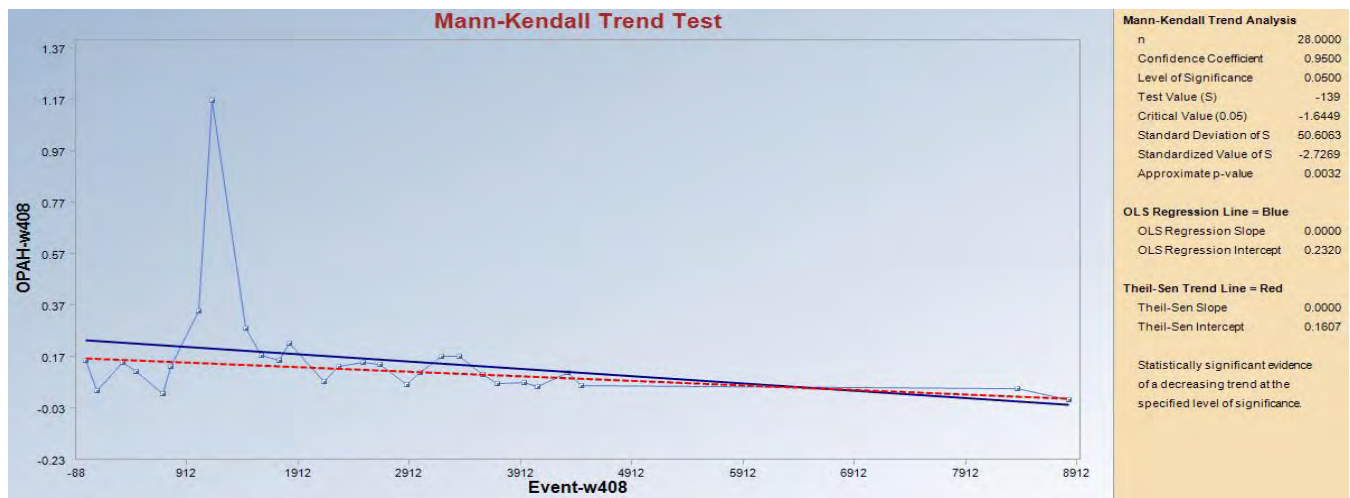
General Statistics

Number of Events	28
Number of Values	28
Minimum	0
Maximum	1.163
Mean	0.1557
Geometric Mean	0
Median	0.1185
Standard Deviation	0.2114705
SEM	0.0399642

Mann-Kendall Test

Test Value (S)	-139
Critical Value (0.05)	-1.644854
Standard Deviation of S	50.606324
Standardized Value of S	-2.726932
Approximate p-value	0.0031963

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W409

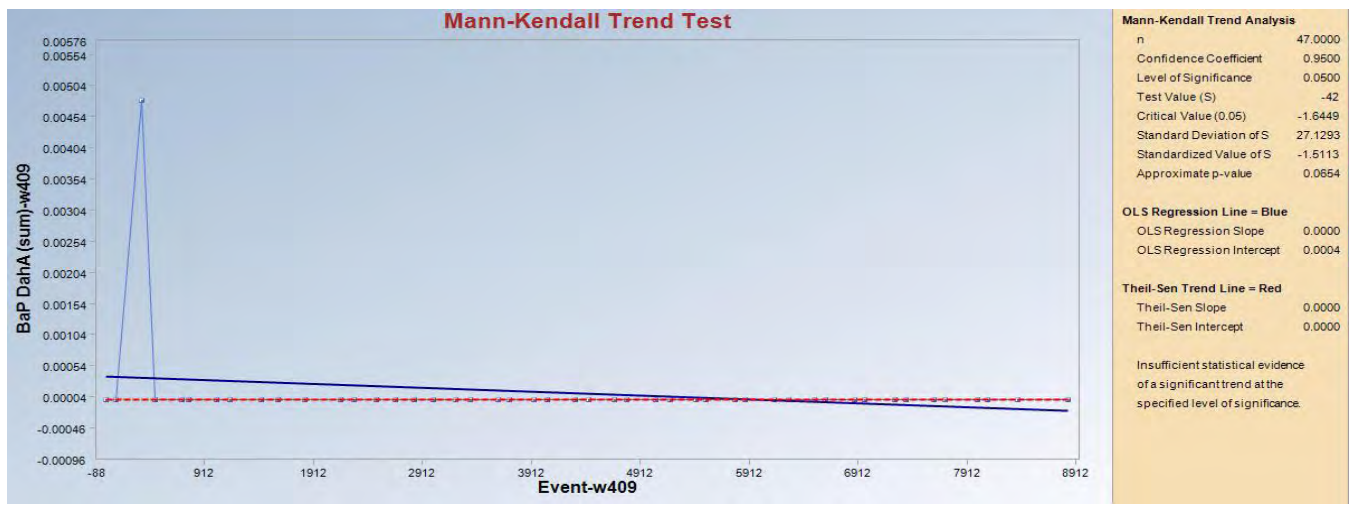
General Statistics

Number of Events	47
Number of Values	47
Minimum	0
Maximum	0.0048
Mean	1.02E-04
Geometric Mean	0
Median	0
Standard Deviation	7.00E-04
SEM	1.02E-04

Mann-Kendall Test

Test Value (S)	-42
Critical Value (0.05)	-1.644854
Standard Deviation of S	27.12932
Standardized Value of S	-1.51128
Approximate p-value	0.0653586

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W409

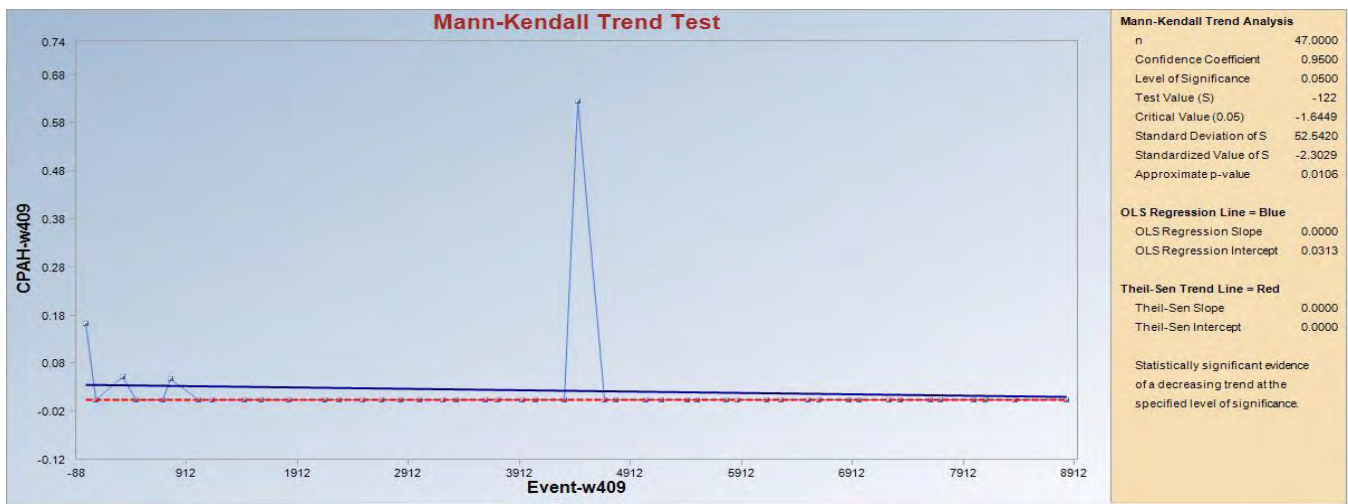
General Statistics

Number of Events	47
Number of Values	47
Minimum	0
Maximum	0.62
Mean	0.018517
Geometric Mean	0
Median	0
Standard Deviation	0.0929876
SEM	0.0135636

Mann-Kendall Test

Test Value (S)	-122
Critical Value (0.05)	-1.644854
Standard Deviation of S	52.542047
Standardized Value of S	-2.302918
Approximate p-value	0.0106417

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W409

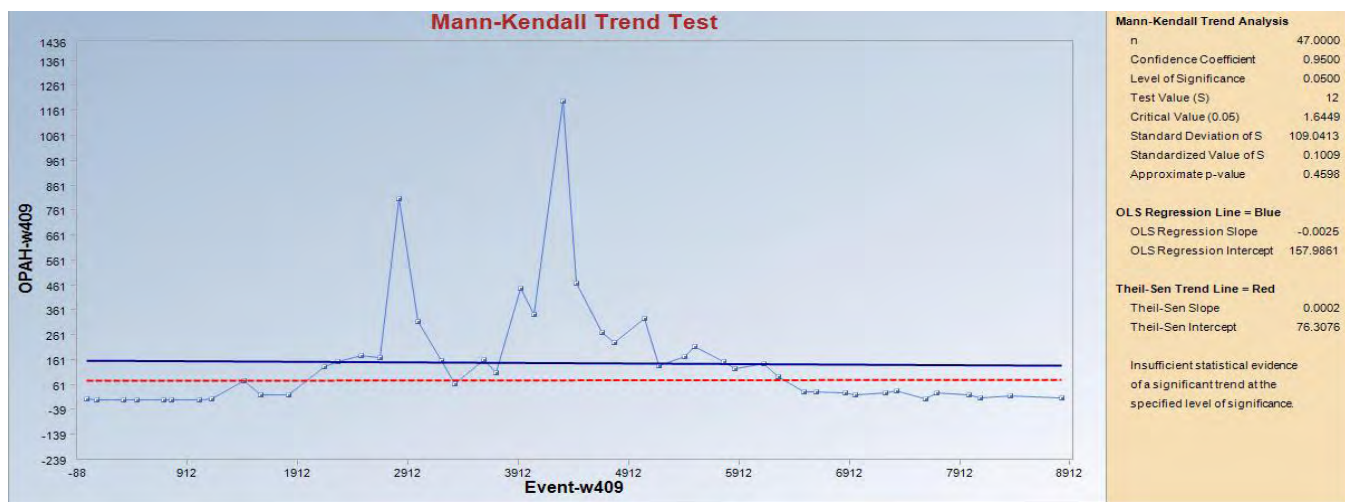
General Statistics

Number of Events	47
Number of Values	47
Minimum	0.156
Maximum	1196.9
Mean	147.33243
Geometric Mean	35.568603
Median	77.12
Standard Deviation	221.89203
SEM	32.366279

Mann-Kendall Test

Test Value (S)	12
Critical Value (0.05)	1.6448536
Standard Deviation of S	109.04128
Standardized Value of S	0.1008792
Approximate p-value	0.4598232

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W410

General Statistics

Number of Events	59
Number of Values	59
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - W410

General Statistics

Number of Events	59
Number of Values	59
Minimum	0
Maximum	0.95
Mean	0.0161831
Geometric Mean	0
Median	0
Standard Deviation	0.1236703
SEM	0.0161005

Mann-Kendall Test

Test Value (S)	-45
Critical Value (0.05)	-1.644854
Standard Deviation of S	47.759816
Standardized Value of S	-0.921277
Approximate p-value	0.178453

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

OPAH (sum) - W410

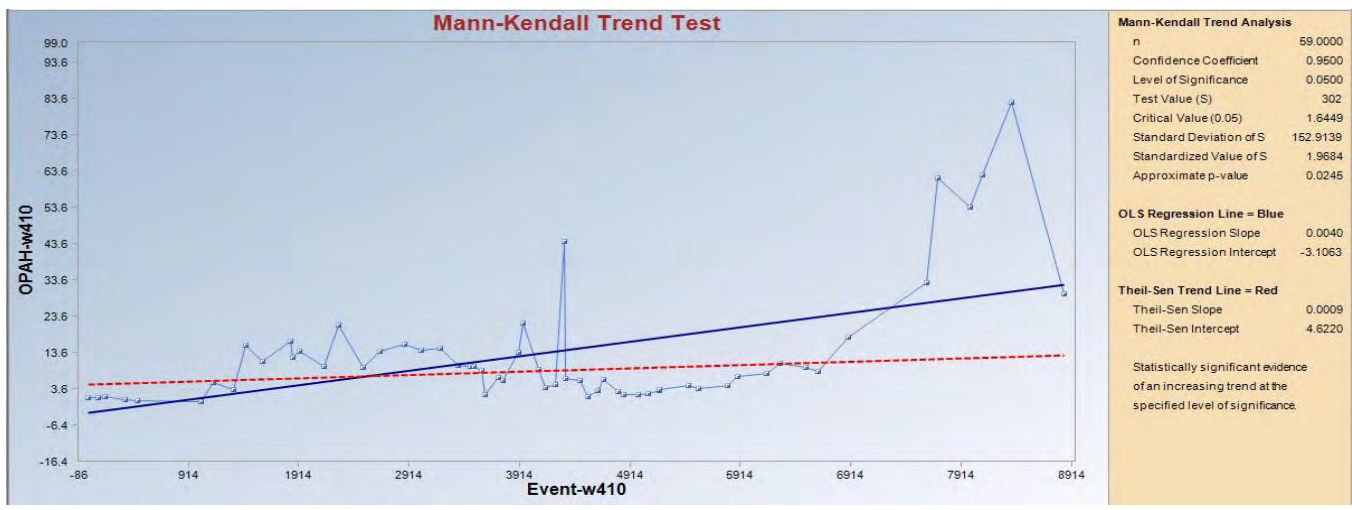
General Statistics

Number of Events	59
Number of Values	59
Minimum	0.0848
Maximum	82.505
Mean	12.981025
Geometric Mean	6.7120539
Median	8.3587
Standard Deviation	16.621164
SEM	2.1638913

Mann-Kendall Test

Test Value (S)	302
Critical Value (0.05)	1.6448536
Standard Deviation of S	152.91392
Standardized Value of S	1.9684277
Approximate p-value	0.0245094

Statistically significant evidence of an increasing trend at the specified level of significance.



BaP DahA (sum) - W411

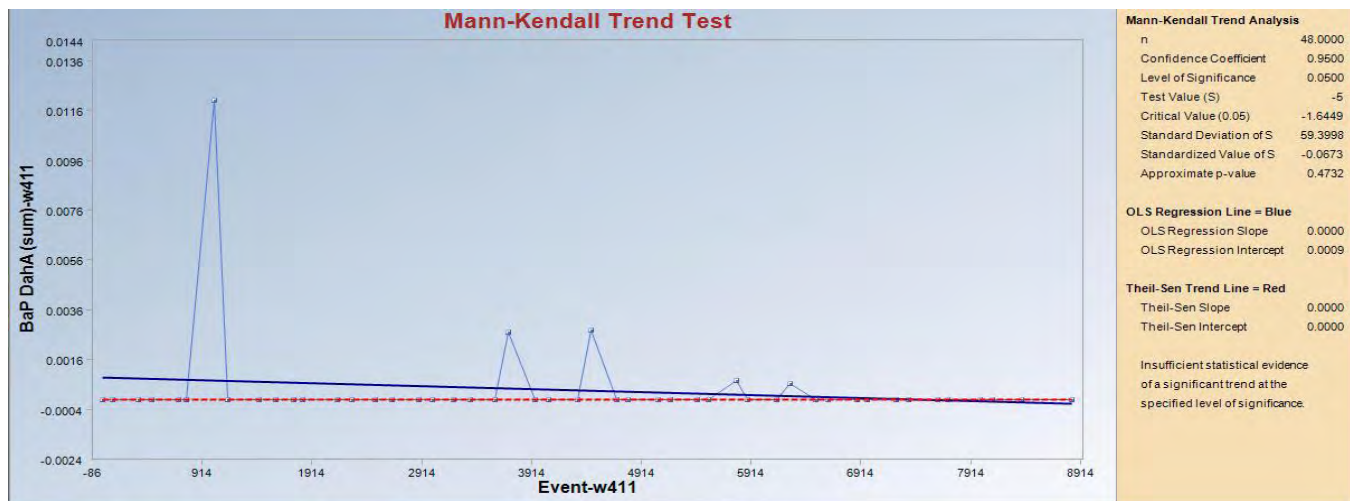
General Statistics

Number of Events	48
Number of Values	48
Minimum	0
Maximum	0.012
Mean	3.93E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0018023
SEM	2.60E-04

Mann-Kendall Test

Test Value (S)	-5
Critical Value (0.05)	-1.644854
Standard Deviation of S	59.399776
Standardized Value of S	-0.06734
Approximate p-value	0.4731554

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W411

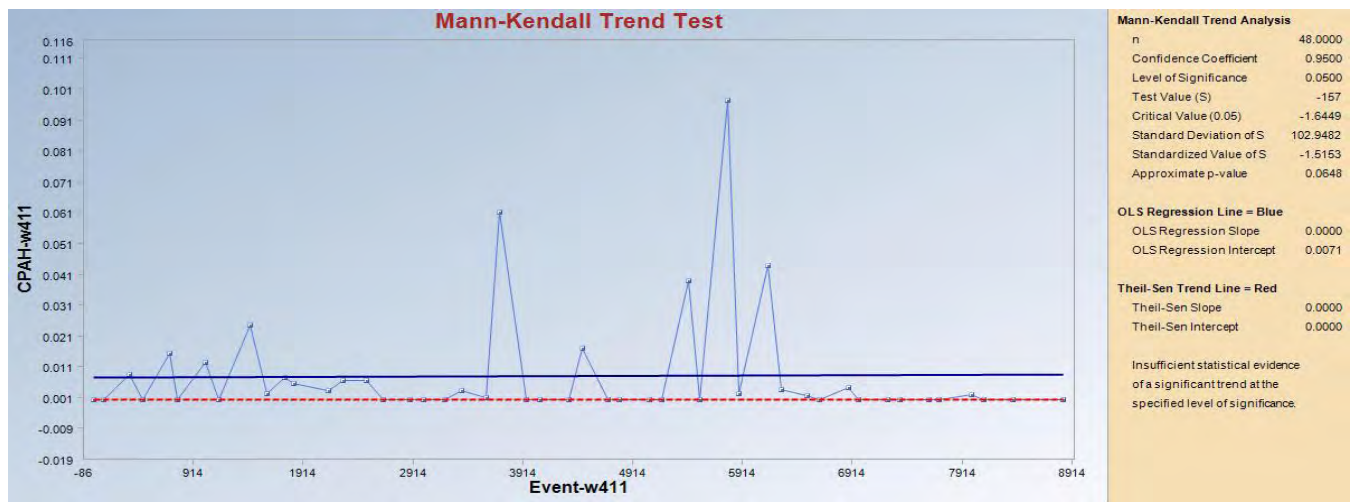
General Statistics

Number of Events	48
Number of Values	48
Minimum	0
Maximum	0.09694
Mean	0.0074858
Geometric Mean	0
Median	0
Standard Deviation	0.0180017
SEM	0.0025983

Mann-Kendall Test

Test Value (S)	-157
Critical Value (0.05)	-1.644854
Standard Deviation of S	102.94821
Standardized Value of S	-1.515325
Approximate p-value	0.0648451

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W411

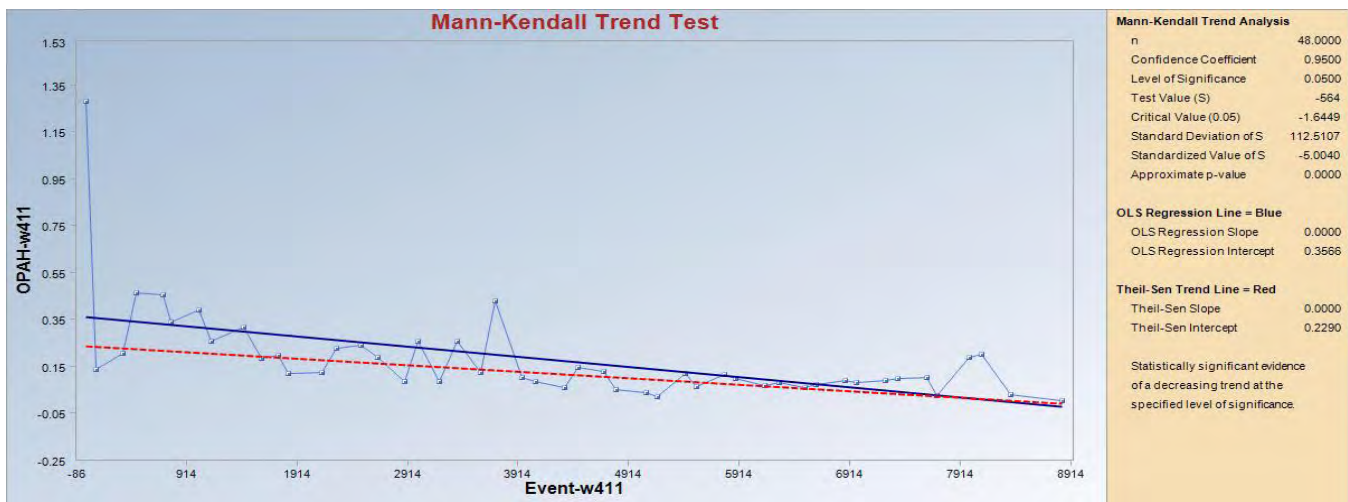
General Statistics

Number of Events	48
Number of Values	48
Minimum	0
Maximum	1.2739
Mean	0.1740219
Geometric Mean	0
Median	0.11295
Standard Deviation	0.1987302
SEM	0.0286842

Mann-Kendall Test

Test Value (S)	-564
Critical Value (0.05)	-1.644854
Standard Deviation of S	112.51074
Standardized Value of S	-5.003967
Approximate p-value	2.81E-07

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - w412

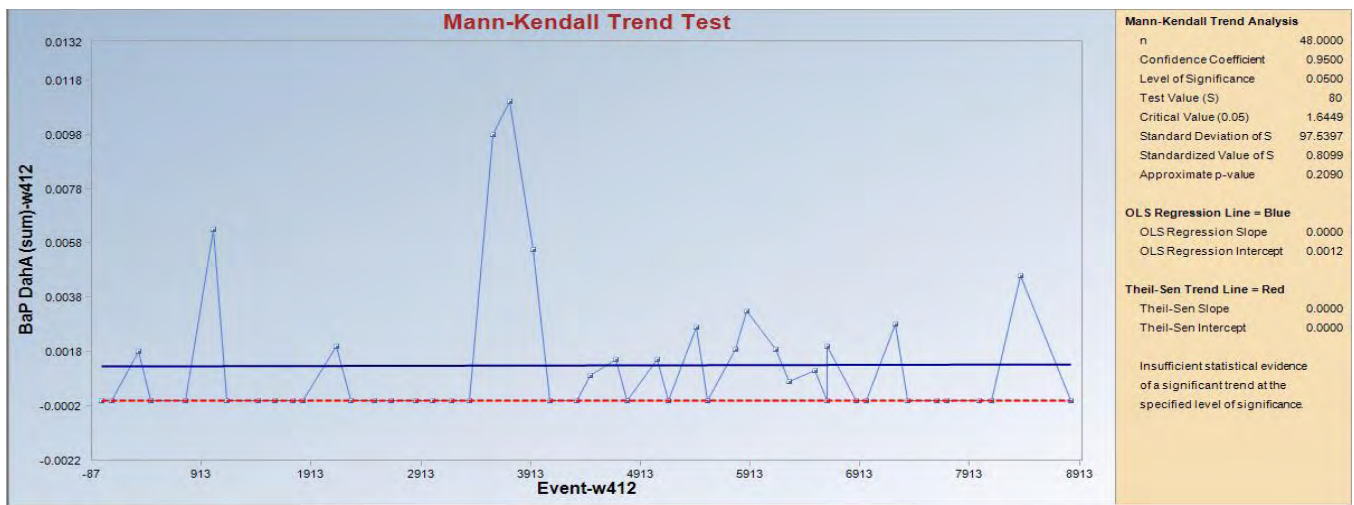
General Statistics

Number of Events	48
Number of Values	48
Minimum	0
Maximum	0.011
Mean	0.0012783
Geometric Mean	0
Median	0
Standard Deviation	0.0024481
SEM	3.53E-04

Mann-Kendall Test

Test Value (S)	80
Critical Value (0.05)	1.6448536
Standard Deviation of S	97.539735
Standardized Value of S	0.8099263
Approximate p-value	0.2089913

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W412

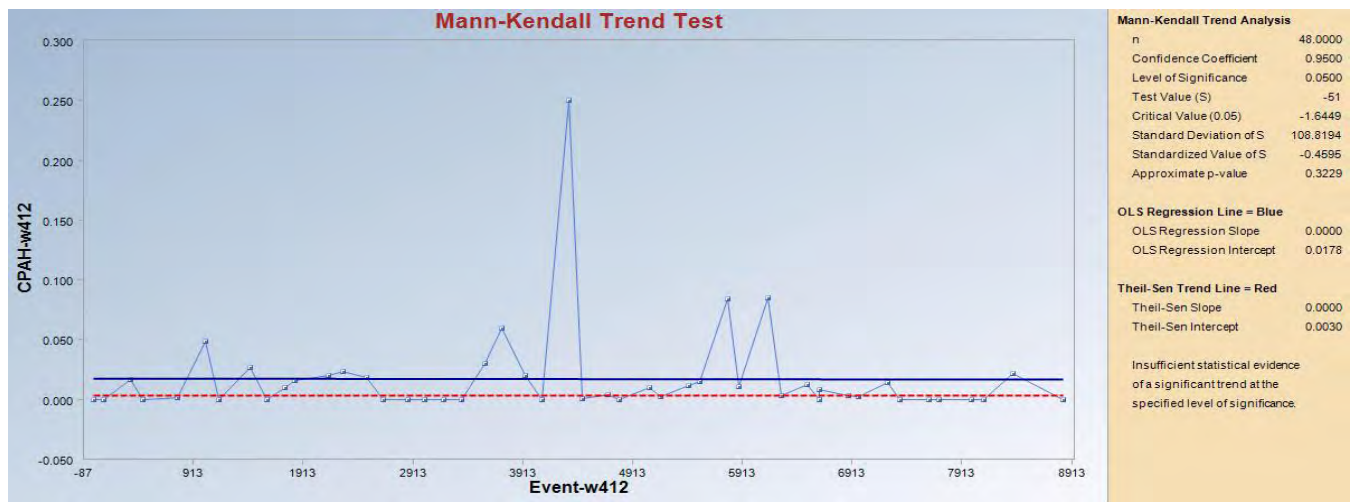
General Statistics

Number of Events	48
Number of Values	48
Minimum	0
Maximum	0.25
Mean	0.0172352
Geometric Mean	0
Median	0.002975
Standard Deviation	0.0396102
SEM	0.0057172

Mann-Kendall Test

Test Value (S)	-51
Critical Value (0.05)	-1.644854
Standard Deviation of S	108.81942
Standardized Value of S	-0.459477
Approximate p-value	0.3229459

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W412

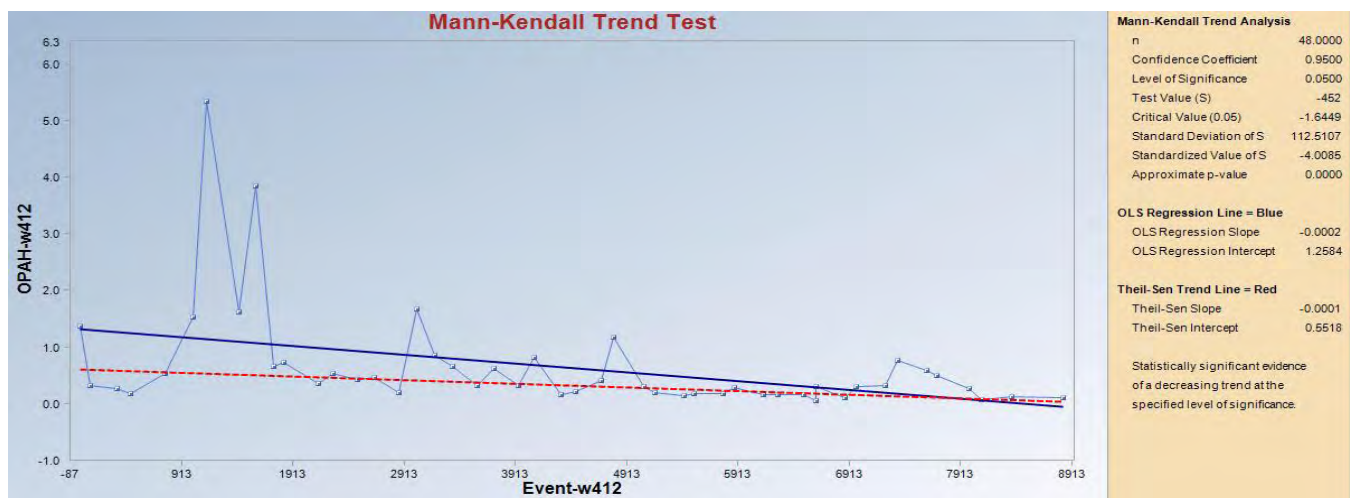
General Statistics

Number of Events	48
Number of Values	48
Minimum	0.00562
Maximum	5.283
Mean	0.5904404
Geometric Mean	0.282939
Median	0.269255
Standard Deviation	0.9384509
SEM	0.1354537

Mann-Kendall Test

Test Value (S)	-452
Critical Value (0.05)	-1.644854
Standard Deviation of S	112.51074
Standardized Value of S	-4.008506
Approximate p-value	3.06E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W414

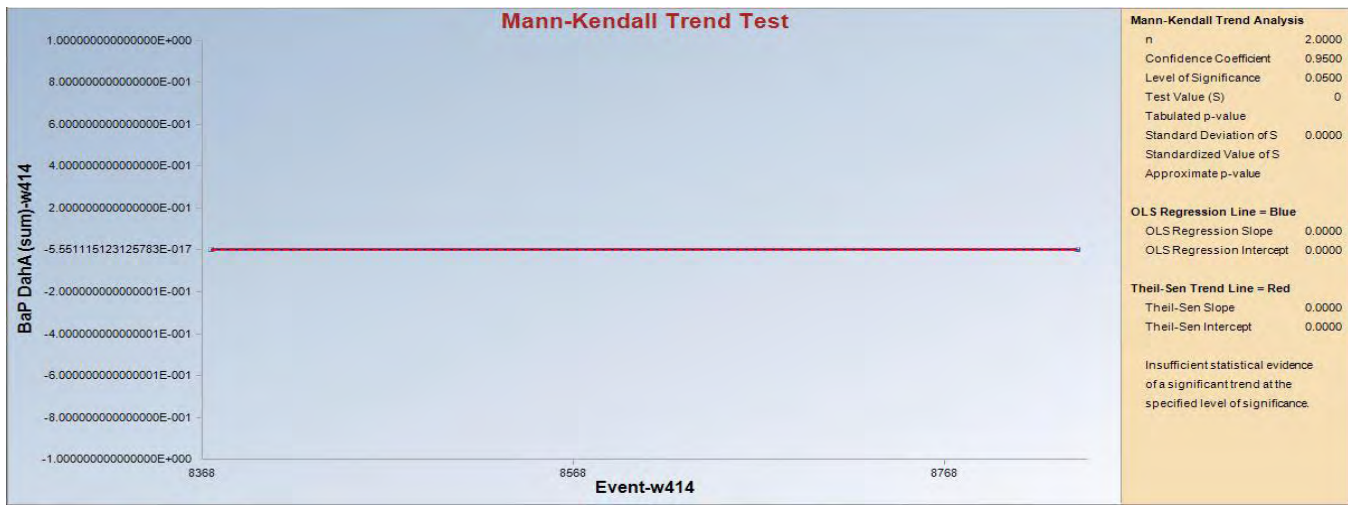
General Statistics

Number of Events	2
Number of Values	2
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W414

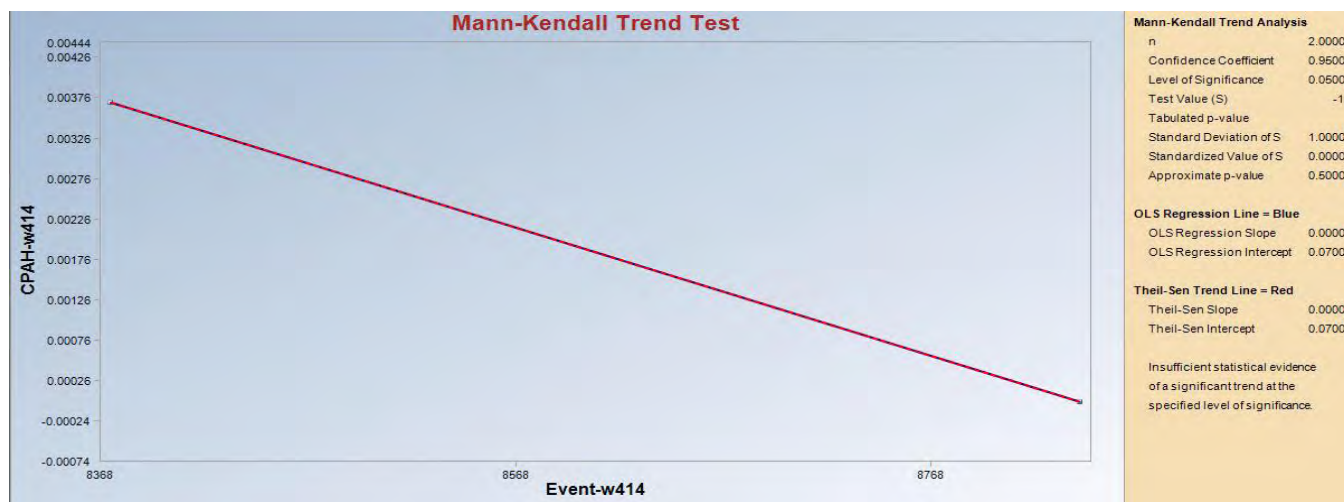
General Statistics

Number of Events	2
Number of Values	2
Minimum	0
Maximum	0.0037
Mean	0.00185
Geometric Mean	0
Median	0.00185
Standard Deviation	0.0026163
SEM	0.00185

Mann-Kendall Test

Test Value (S)	-1
Tabulated p-value	N/A
Standard Deviation of S	1
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W414

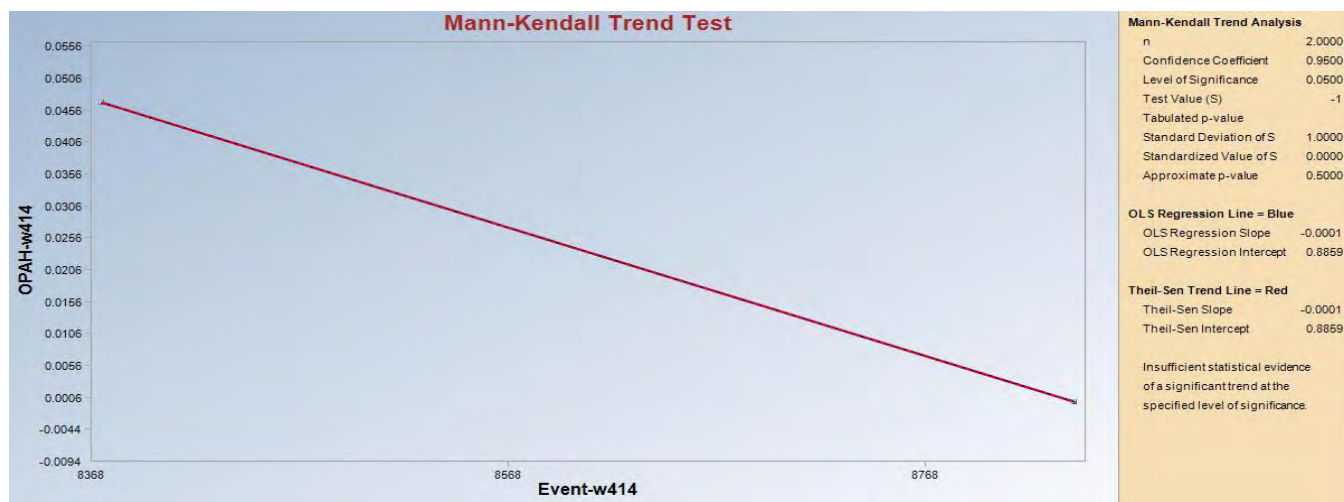
General Statistics

Number of Events	2
Number of Values	2
Minimum	0
Maximum	0.0468
Mean	0.0234
Geometric Mean	0
Median	0.0234
Standard Deviation	0.0330926
SEM	0.0234

Mann-Kendall Test

Test Value (S)	-1
Tabulated p-value	N/A
Standard Deviation of S	1
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



Summary of Statistical PAH Trends

Platteville					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
W101	Monitoring		No Change	No Change	Decreasing
W121	Monitoring		No Change	No Change	No Change
W130	Monitoring		No Change	No Change	No Change
W131	Monitoring		No Change	No Change	Decreasing
W143	Monitoring		No Change	No Change	No Change
W18	Monitoring		No Change	No Change	No Change
W20	Monitoring		No Change	Decreasing	Decreasing
W22	Monitoring		No Change	No Change	No Change
W27	Monitoring		No Change	No Change	Decreasing
W421	Pumping		Increasing	Increasing	Decreasing
W424	Monitoring		No Change	No Change	Decreasing
W426	Monitoring		No Change	Increasing	No Change
W428	Monitoring		No Change	No Change	Decreasing
W434	Monitoring		No Change	No Change	Decreasing
W437	Monitoring		No Change	No Change	Decreasing
W438	Monitoring		Decreasing	No Change	No Change

BaP DahA (sum) - W101

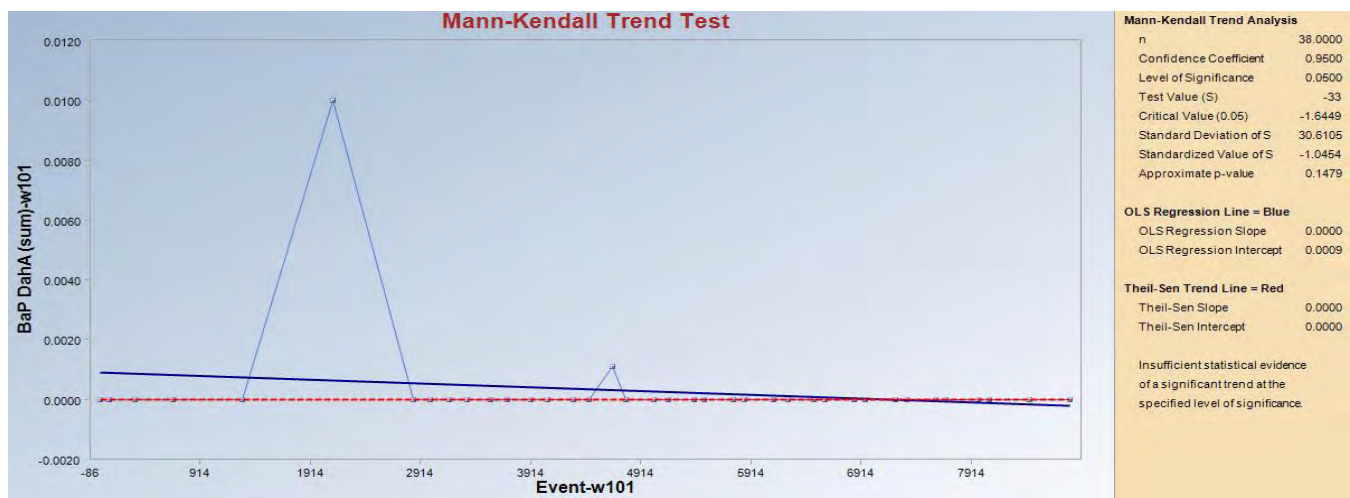
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	0.01
Mean	2.92E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0016272
SEM	2.64E-04

Mann-Kendall Test

Test Value (S)	-33
Critical Value (0.05)	-1.644854
Standard Deviation of S	30.610456
Standardized Value of S	-1.045394
Approximate p-value	0.1479204

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W101

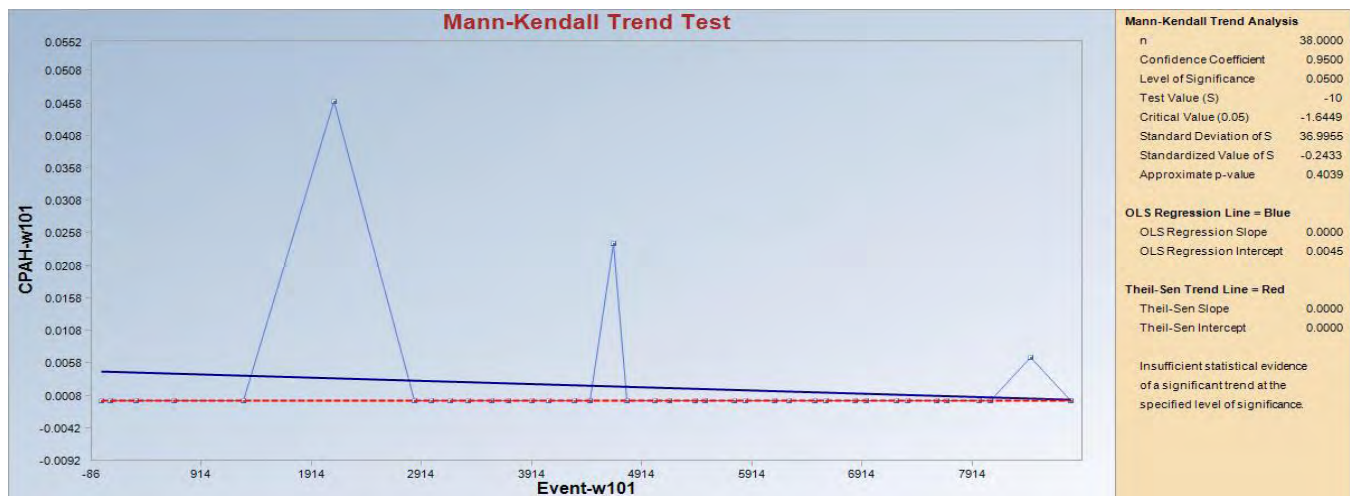
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	0.046
Mean	0.0020184
Geometric Mean	0
Median	0
Standard Deviation	0.0083594
SEM	0.0013561

Mann-Kendall Test

Test Value (S)	-10
Critical Value (0.05)	-1.644854
Standard Deviation of S	36.995495
Standardized Value of S	-0.243273
Approximate p-value	0.403897

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W101

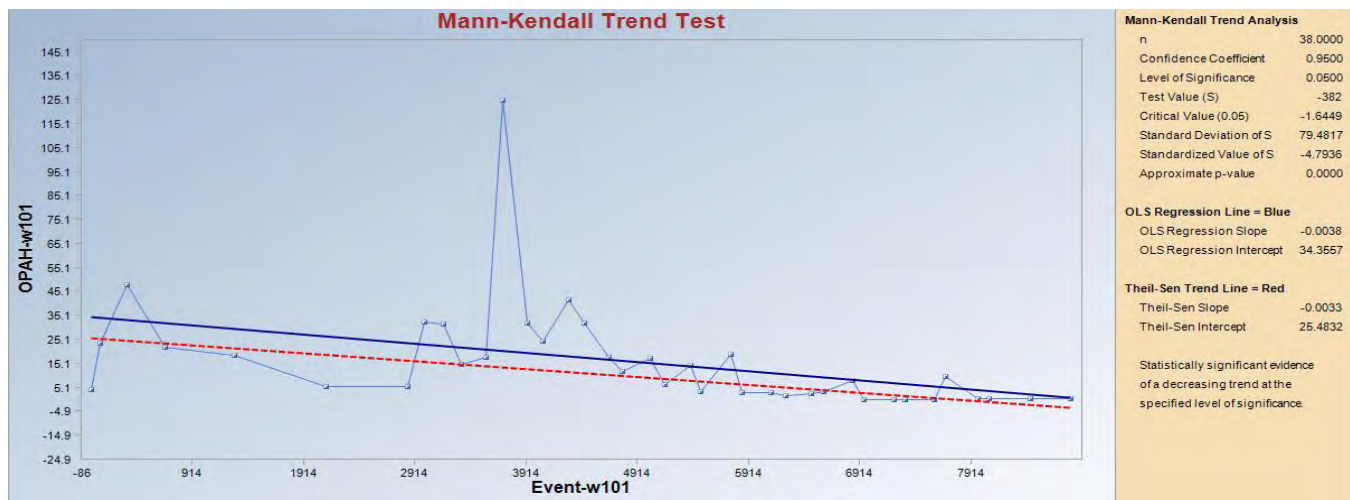
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	124.61
Mean	15.682471
Geometric Mean	0
Median	8.7
Standard Deviation	22.237268
SEM	3.6073612

Mann-Kendall Test

Test Value (S)	-382
Critical Value (0.05)	-1.644854
Standard Deviation of S	79.481654
Standardized Value of S	-4.793559
Approximate p-value	8.19E-07

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W121

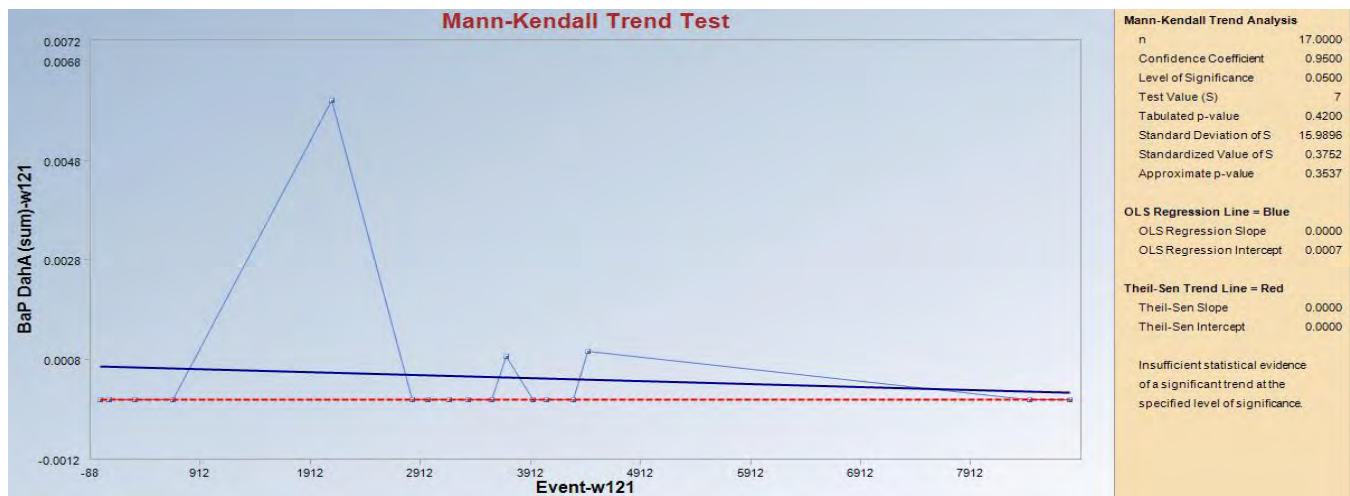
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	0.006
Mean	4.61E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0014595
SEM	3.54E-04

Mann-Kendall Test

Test Value (S)	7
Tabulated p-value	0.42
Standard Deviation of S	15.98958
Standardized Value of S	0.3752444
Approximate p-value	0.3537394

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W121

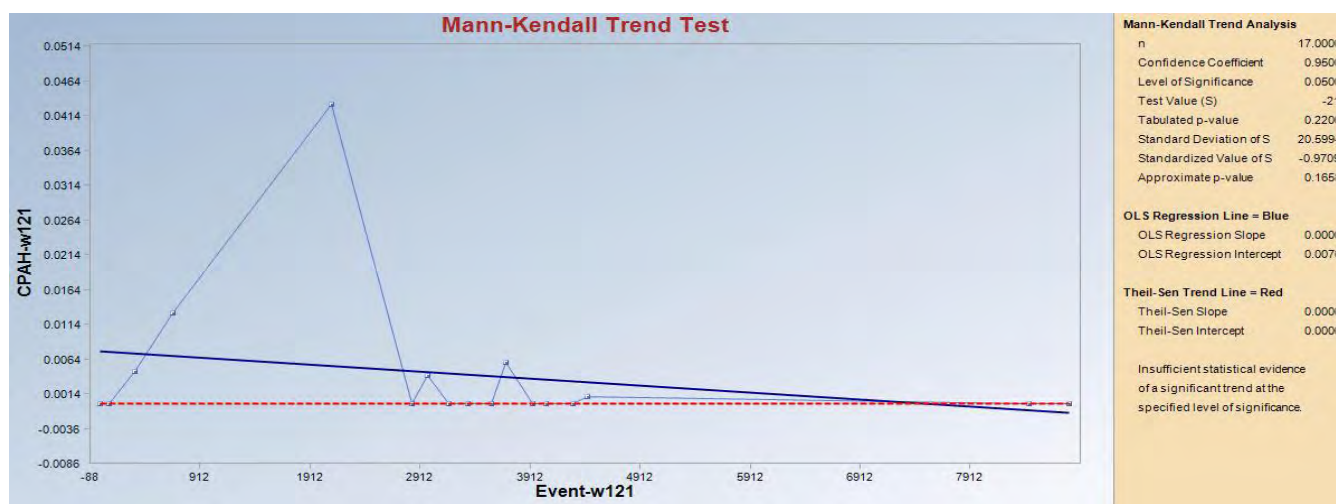
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	0.043
Mean	0.0042082
Geometric Mean	0
Median	0
Standard Deviation	0.0105791
SEM	0.0025658

Mann-Kendall Test

Test Value (S)	-21
Tabulated p-value	0.22
Standard Deviation of S	20.599353
Standardized Value of S	-0.970904
Approximate p-value	0.165798

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W121

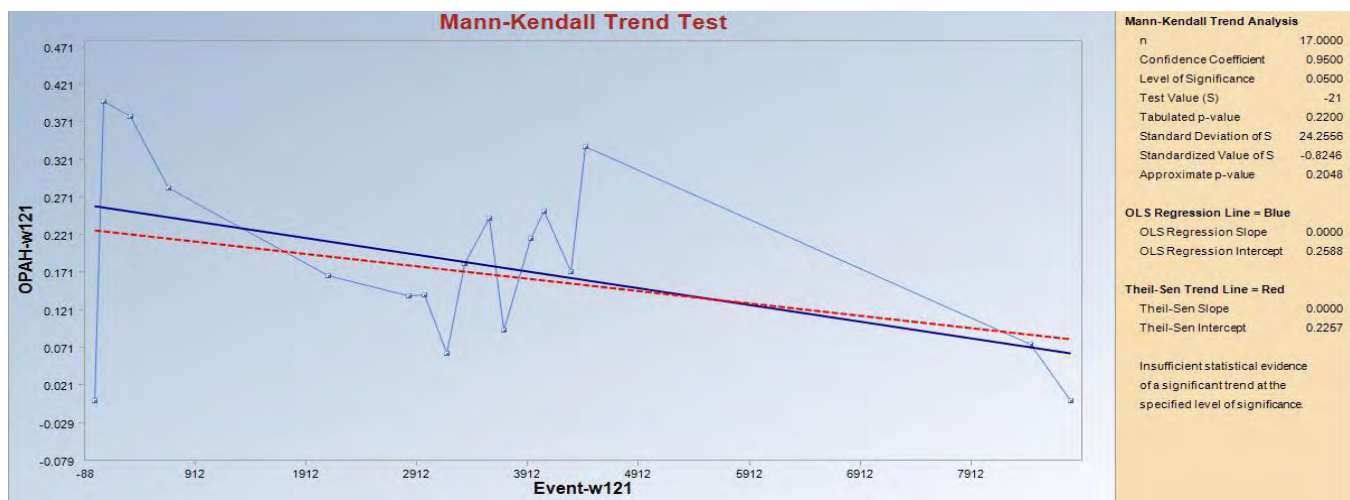
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	0.3973
Mean	0.1843129
Geometric Mean	0
Median	0.1709
Standard Deviation	0.1203868
SEM	0.0291981

Mann-Kendall Test

Test Value (S)	-21
Tabulated p-value	0.22
Standard Deviation of S	24.255584
Standardized Value of S	-0.824552
Approximate p-value	0.2048129

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W130

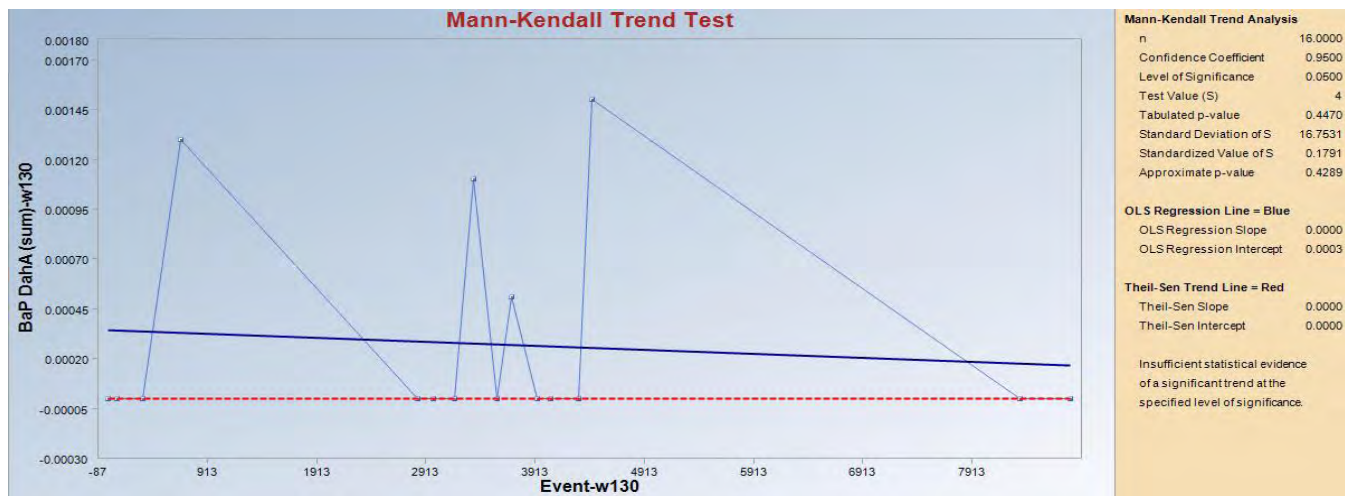
General Statistics

Number of Events	16
Number of Values	16
Minimum	0
Maximum	0.0015
Mean	2.76E-04
Geometric Mean	0
Median	0
Standard Deviation	5.29E-04
SEM	1.32E-04

Mann-Kendall Test

Test Value (S)	4
Tabulated p-value	0.447
Standard Deviation of S	16.753109
Standardized Value of S	0.1790712
Approximate p-value	0.4289409

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W130

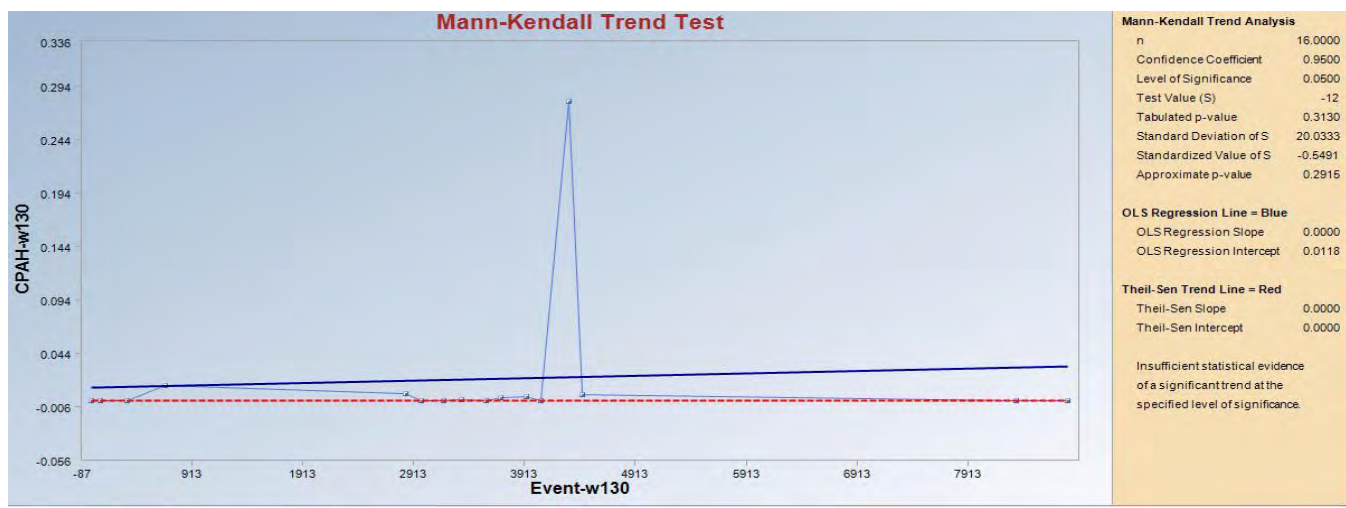
General Statistics

Number of Events	16
Number of Values	16
Minimum	0
Maximum	0.28
Mean	0.0194925
Geometric Mean	0
Median	0
Standard Deviation	0.0695686
SEM	0.0173921

Mann-Kendall Test

Test Value (S)	-12
Tabulated p-value	0.313
Standard Deviation of S	20.033306
Standardized Value of S	-0.549086
Approximate p-value	0.2914733

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W130

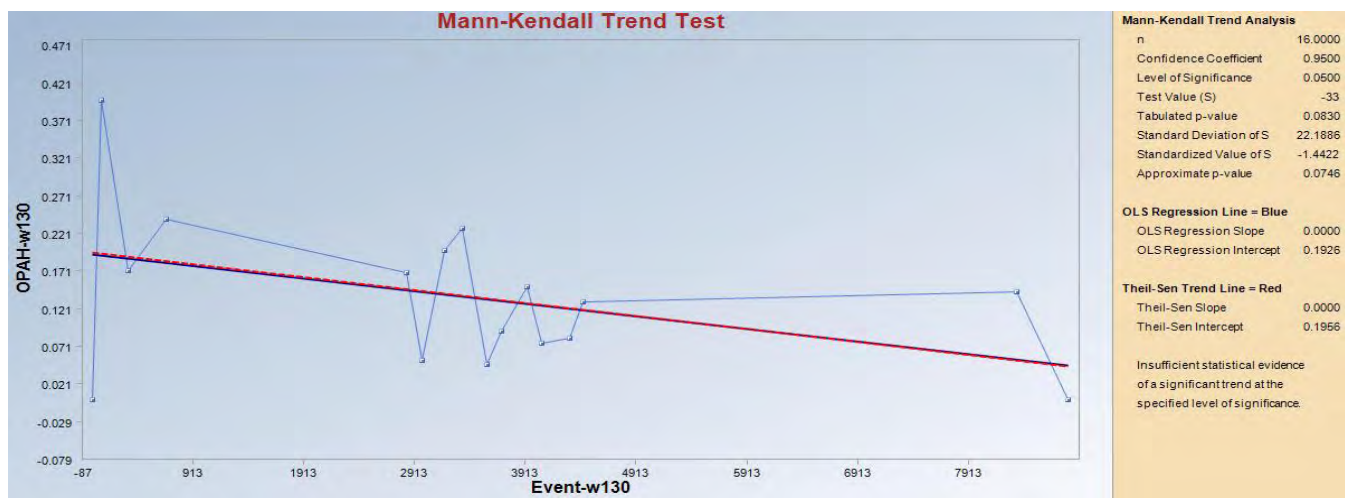
General Statistics

Number of Events	16
Number of Values	16
Minimum	0
Maximum	0.3971
Mean	0.13551
Geometric Mean	0
Median	0.1364
Standard Deviation	0.1014115
SEM	0.0253529

Mann-Kendall Test

Test Value (S)	-33
Tabulated p-value	0.083
Standard Deviation of S	22.188586
Standardized Value of S	-1.442183
Approximate p-value	0.0746254

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W131

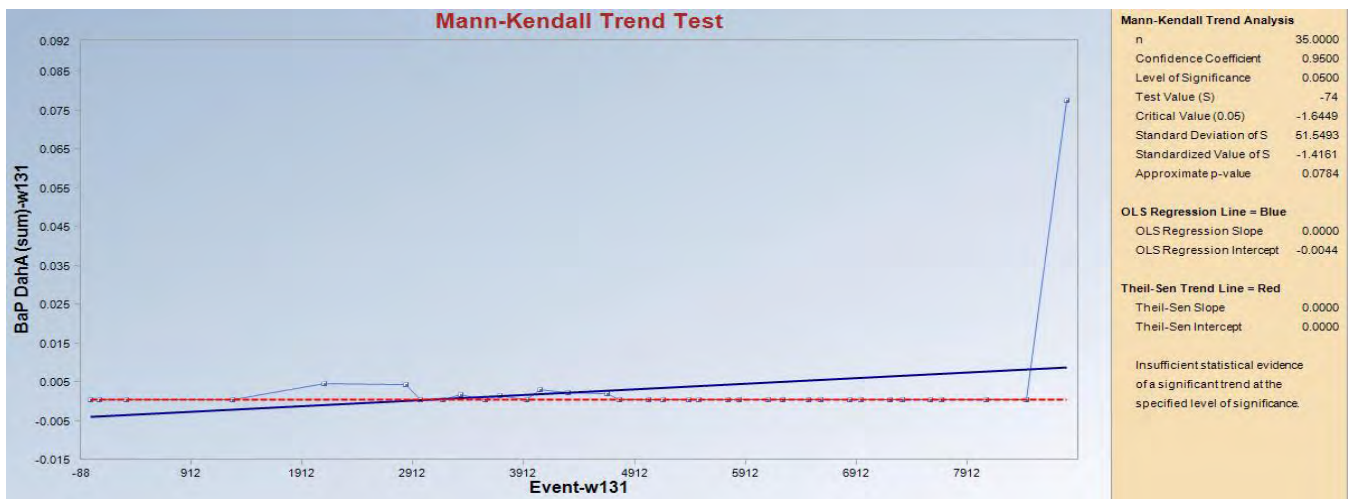
General Statistics

Number of Events	35
Number of Values	35
Minimum	0
Maximum	0.077
Mean	0.0026569
Geometric Mean	0
Median	0
Standard Deviation	0.0129791
SEM	0.0021939

Mann-Kendall Test

Test Value (S)	-74
Critical Value (0.05)	-1.644854
Standard Deviation of S	51.549329
Standardized Value of S	-1.416119
Approximate p-value	0.0783703

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W131

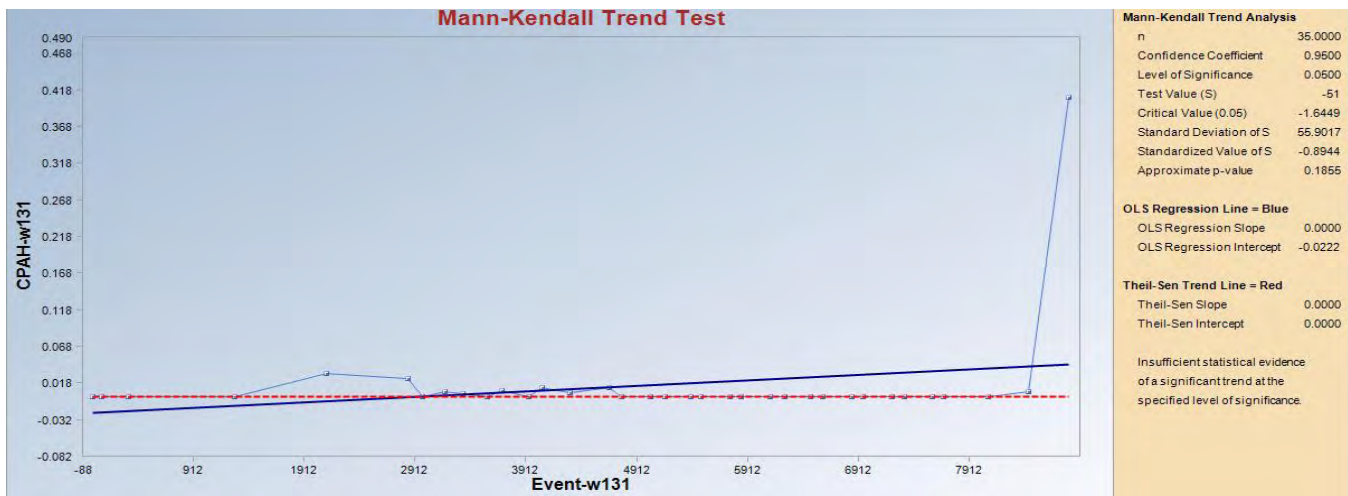
General Statistics

Number of Events	35
Number of Values	35
Minimum	0
Maximum	0.408
Mean	0.0147671
Geometric Mean	0
Median	0
Standard Deviation	0.0687787
SEM	0.0116257

Mann-Kendall Test

Test Value (S)	-51
Critical Value (0.05)	-1.644854
Standard Deviation of S	55.901699
Standardized Value of S	-0.894427
Approximate p-value	0.1855467

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W131

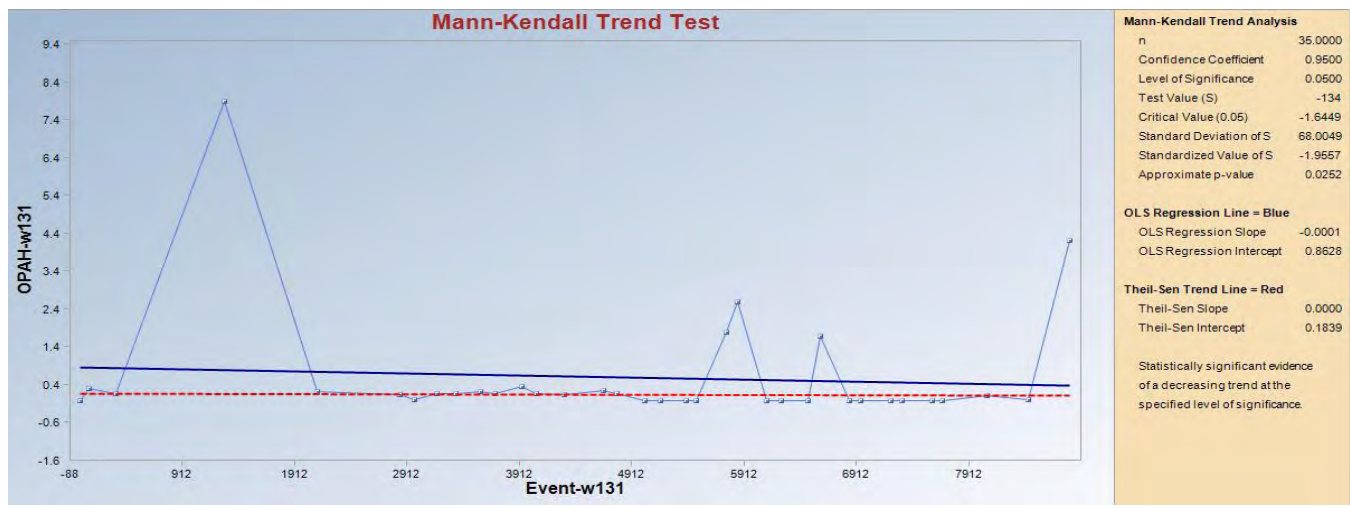
General Statistics

Number of Events	35
Number of Values	35
Minimum	0
Maximum	7.901
Mean	0.6040931
Geometric Mean	0
Median	0.1509
Standard Deviation	1.5442346
SEM	0.2610233

Mann-Kendall Test

Test Value (S)	-134
Critical Value (0.05)	-1.644854
Standard Deviation of S	68.004902
Standardized Value of S	-1.955741
Approximate p-value	0.0252478

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W143

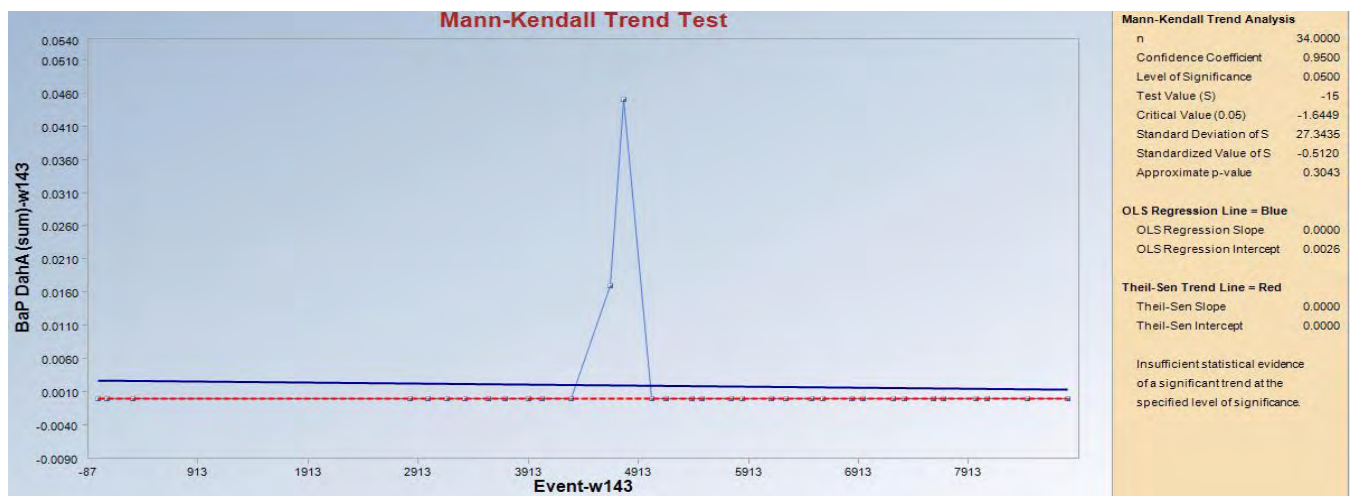
General Statistics

Number of Events	34
Number of Values	34
Minimum	0
Maximum	0.045
Mean	0.0018235
Geometric Mean	0
Median	0
Standard Deviation	0.0081667
SEM	0.0014006

Mann-Kendall Test

Test Value (S)	-15
Critical Value (0.05)	-1.644854
Standard Deviation of S	27.343494
Standardized Value of S	-0.512005
Approximate p-value	0.3043238

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W143

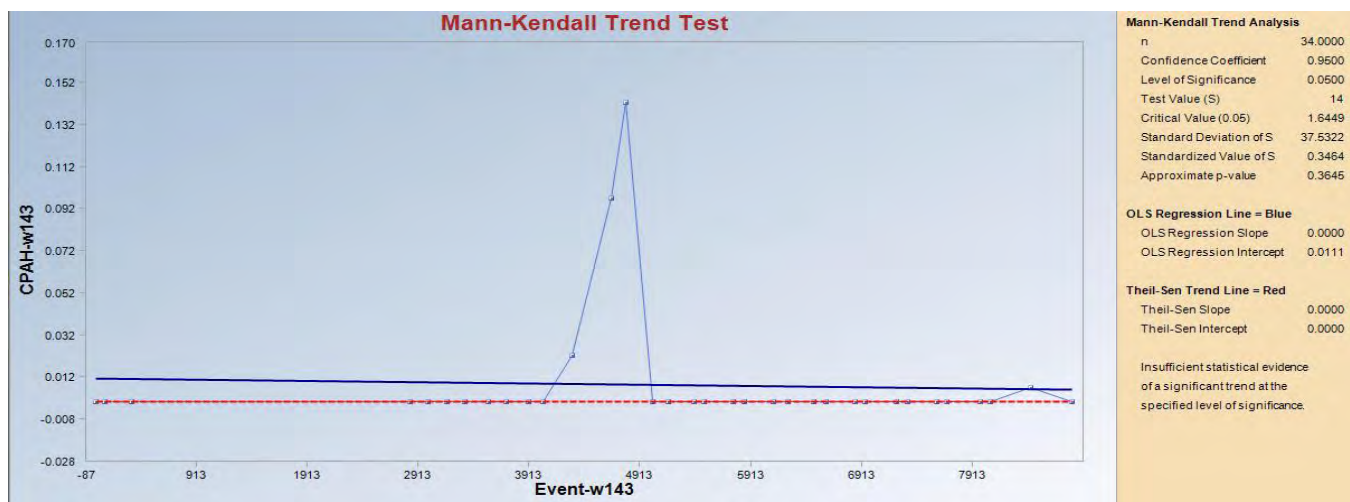
General Statistics

Number of Events	34
Number of Values	34
Minimum	0
Maximum	0.142
Mean	0.0078588
Geometric Mean	0
Median	0
Standard Deviation	0.0291044
SEM	0.0049914

Mann-Kendall Test

Test Value (S)	14
Critical Value (0.05)	1.6448536
Standard Deviation of S	37.532208
Standardized Value of S	0.3463692
Approximate p-value	0.3645326

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W143

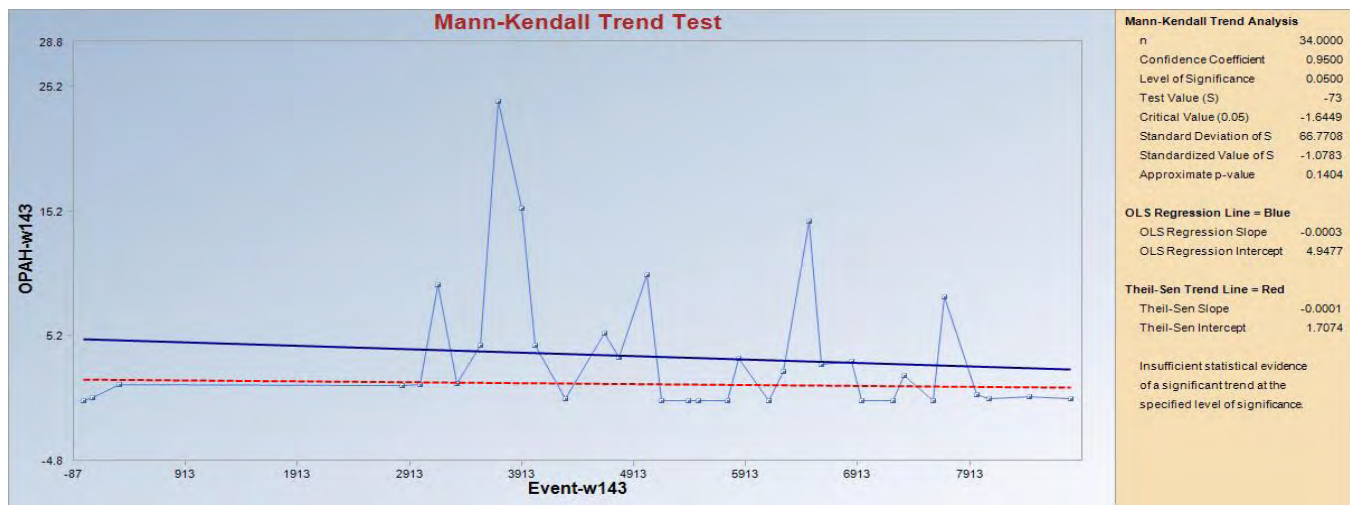
General Statistics

Number of Events	34
Number of Values	34
Minimum	0
Maximum	23.994
Mean	3.5155206
Geometric Mean	0
Median	1.275
Standard Deviation	5.4607027
SEM	0.9365028

Mann-Kendall Test

Test Value (S)	-73
Critical Value (0.05)	-1.644854
Standard Deviation of S	66.770752
Standardized Value of S	-1.078316
Approximate p-value	0.1404463

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W18

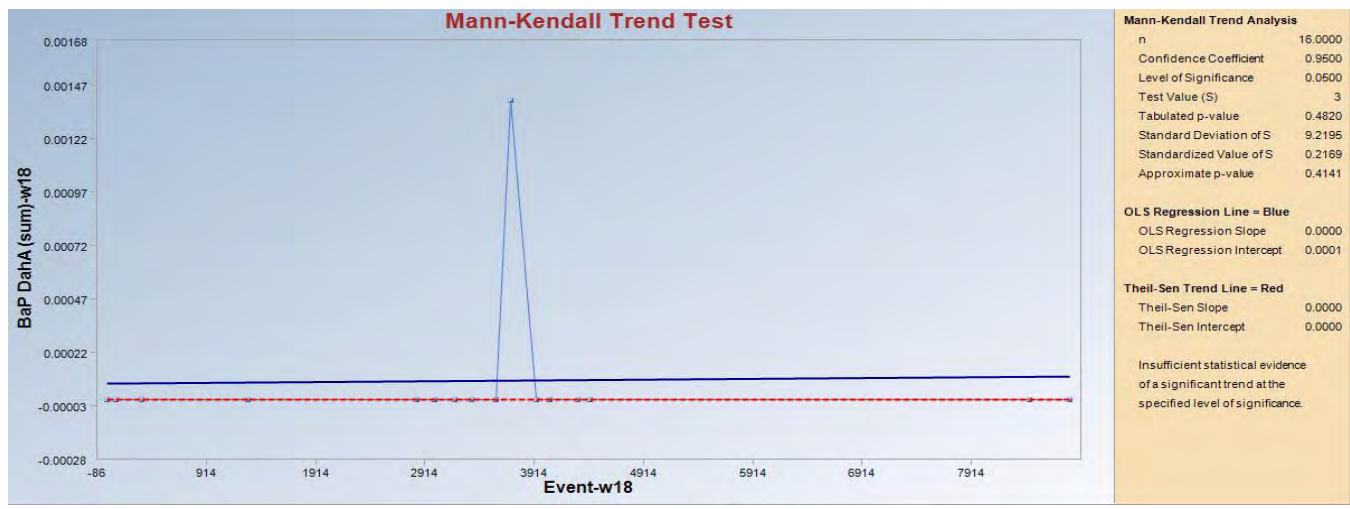
General Statistics

Number of Events	16
Number of Values	16
Minimum	0
Maximum	0.0014
Mean	8.75E-05
Geometric Mean	0
Median	0
Standard Deviation	3.50E-04
SEM	8.75E-05

Mann-Kendall Test

Test Value (S)	3
Tabulated p-value	0.482
Standard Deviation of S	9.2195445
Standardized Value of S	0.2169305
Approximate p-value	0.4141313

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W18

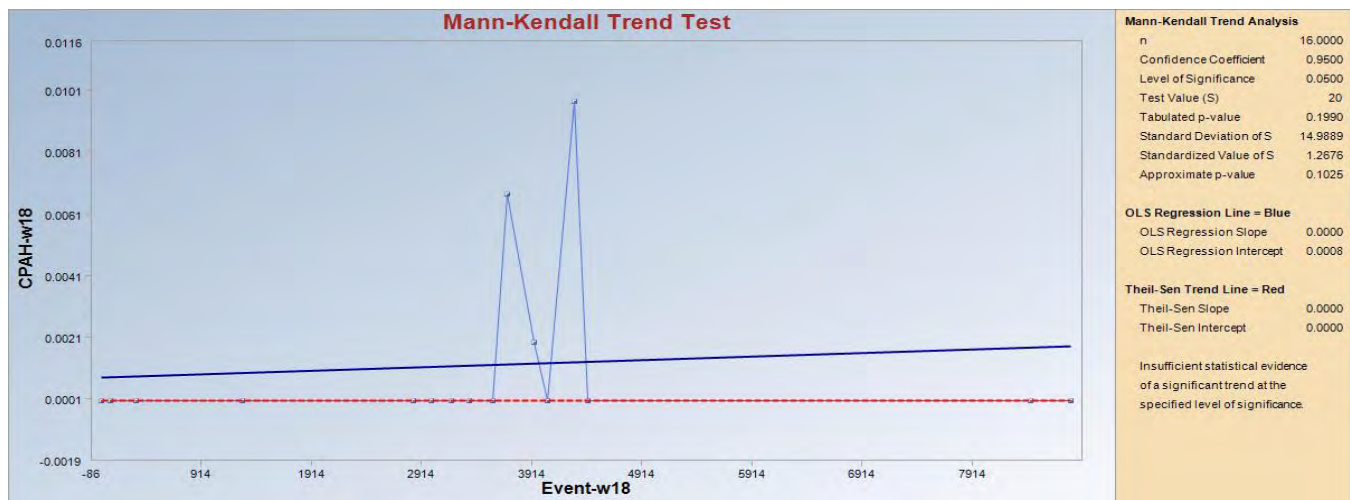
General Statistics

Number of Events	16
Number of Values	16
Minimum	0
Maximum	0.0097
Mean	0.0011444
Geometric Mean	0
Median	0
Standard Deviation	0.0028492
SEM	7.12E-04

Mann-Kendall Test

Test Value (S)	20
Tabulated p-value	0.199
Standard Deviation of S	14.988885
Standardized Value of S	1.267606
Approximate p-value	0.1024693

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W18

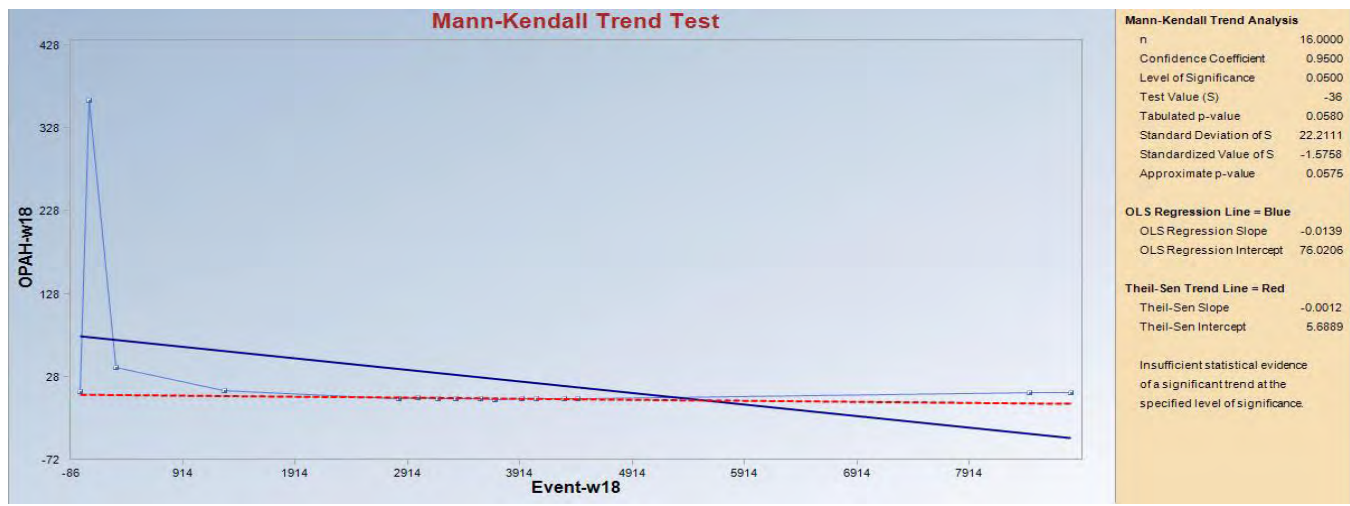
General Statistics

Number of Events	16
Number of Values	16
Minimum	0.30507
Maximum	360.8
Mean	27.983311
Geometric Mean	3.1772412
Median	1.4273
Standard Deviation	89.259532
SEM	22.314883

Mann-Kendall Test

Test Value (S)	-36
Tabulated p-value	0.058
Standard Deviation of S	22.211108
Standardized Value of S	-1.575788
Approximate p-value	0.0575373

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W20

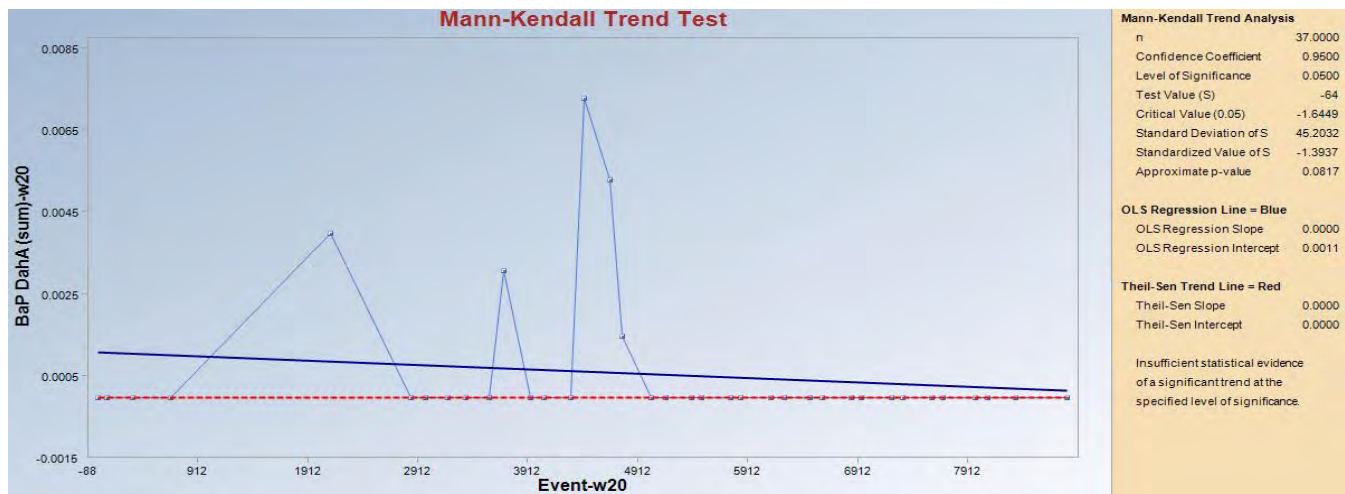
General Statistics

Number of Events	37
Number of Values	37
Minimum	0
Maximum	0.0073
Mean	5.73E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0016423
SEM	2.70E-04

Mann-Kendall Test

Test Value (S)	-64
Critical Value (0.05)	-1.644854
Standard Deviation of S	45.203245
Standardized Value of S	-1.393705
Approximate p-value	0.0817033

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W20

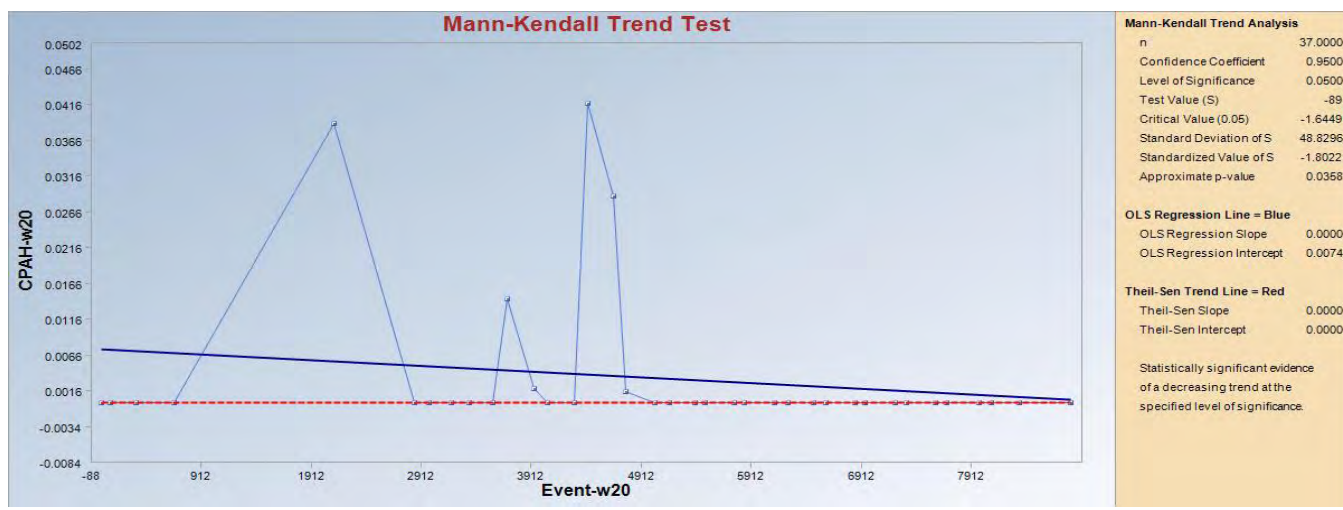
General Statistics

Number of Events	37
Number of Values	37
Minimum	0
Maximum	0.0418
Mean	0.0034514
Geometric Mean	0
Median	0
Standard Deviation	0.0103806
SEM	0.0017066

Mann-Kendall Test

Test Value (S)	-89
Critical Value (0.05)	-1.644854
Standard Deviation of S	48.829636
Standardized Value of S	-1.802184
Approximate p-value	0.0357582

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W20

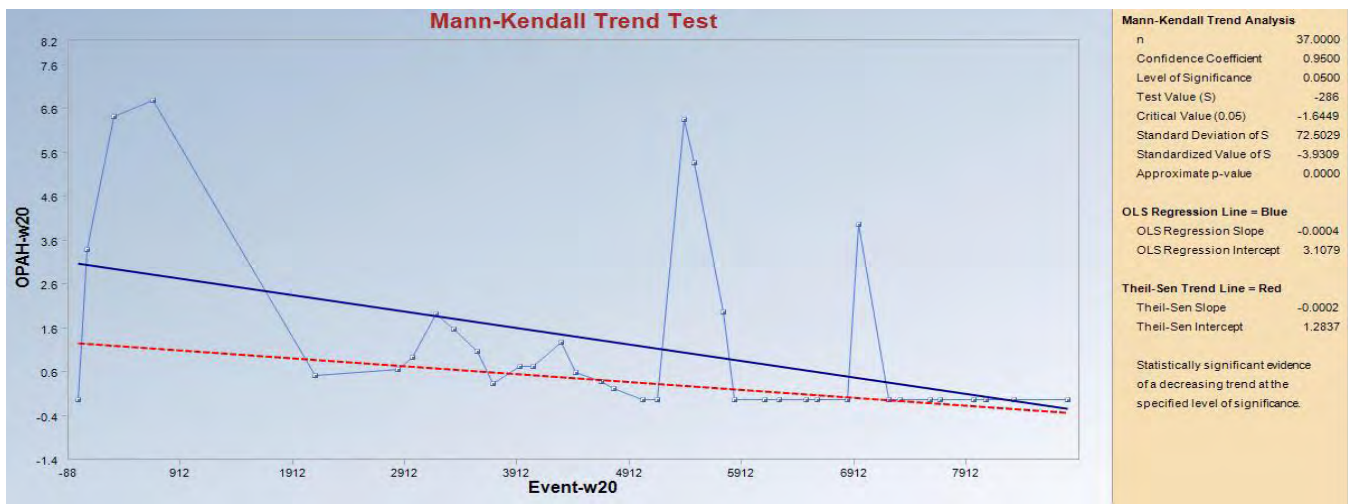
General Statistics

Number of Events	37
Number of Values	37
Minimum	0
Maximum	6.822
Mean	1.2371203
Geometric Mean	0
Median	0.35805
Standard Deviation	2.015516
SEM	0.3313488

Mann-Kendall Test

Test Value (S)	-286
Critical Value (0.05)	-1.644854
Standard Deviation of S	72.502874
Standardized Value of S	-3.930879
Approximate p-value	4.23E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W22

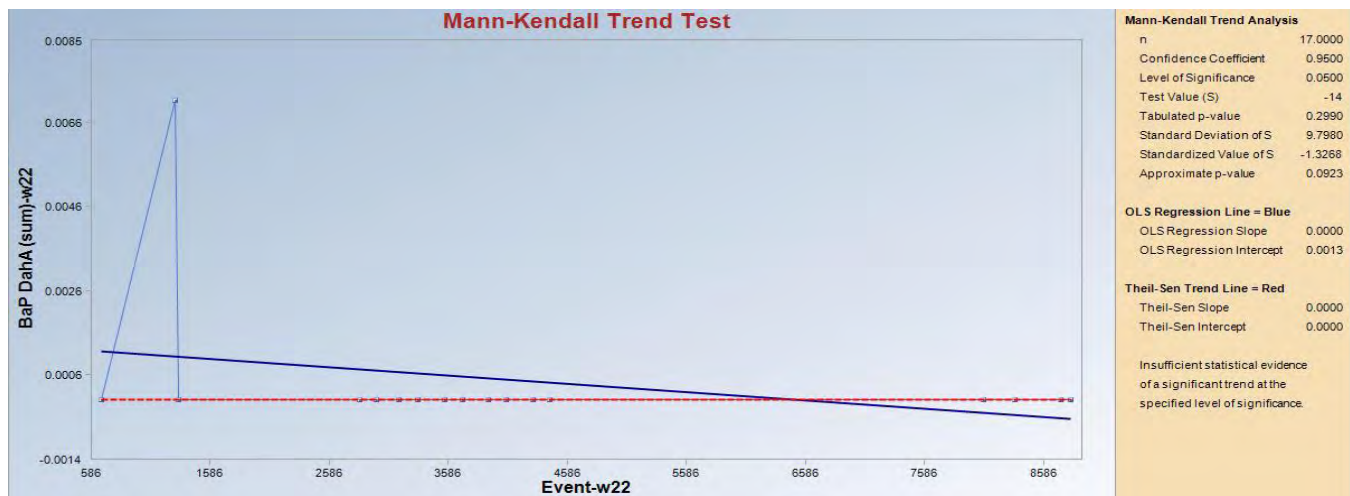
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	0.0071
Mean	4.18E-04
Geometric Mean	0
Median	0
Standard Deviation	0.001722
SEM	4.18E-04

Mann-Kendall Test

Test Value (S)	-14
Tabulated p-value	0.299
Standard Deviation of S	9.797959
Standardized Value of S	-1.326807
Approximate p-value	0.0922863

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) -W22

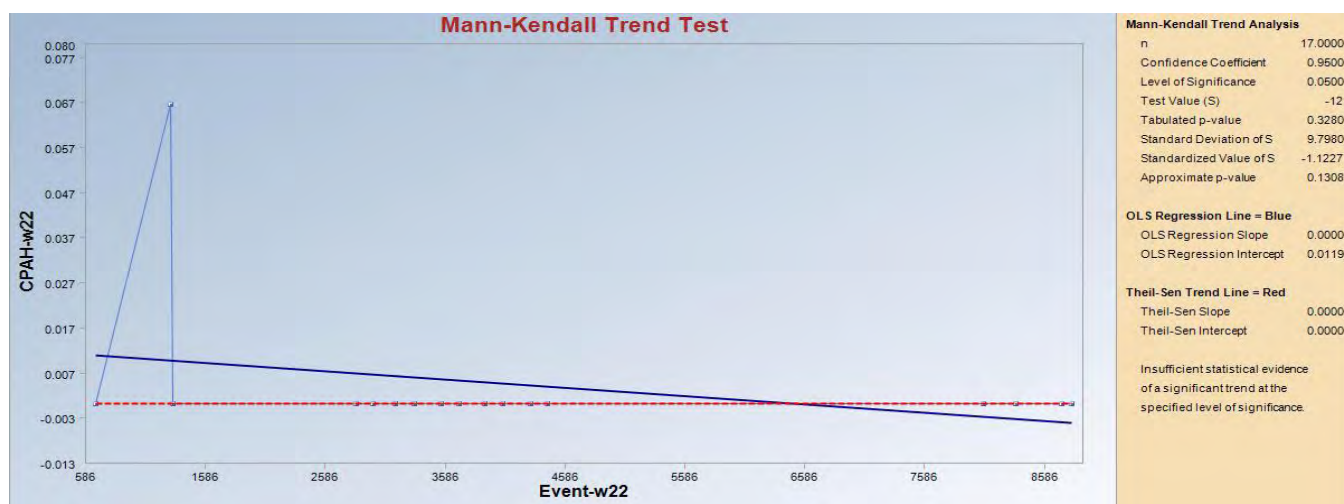
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	0.0663
Mean	0.0039
Geometric Mean	0
Median	0
Standard Deviation	0.0160801
SEM	0.0039

Mann-Kendall Test

Test Value (S)	-12
Tabulated p-value	0.328
Standard Deviation of S	9.797959
Standardized Value of S	-1.122683
Approximate p-value	0.1307861

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W22

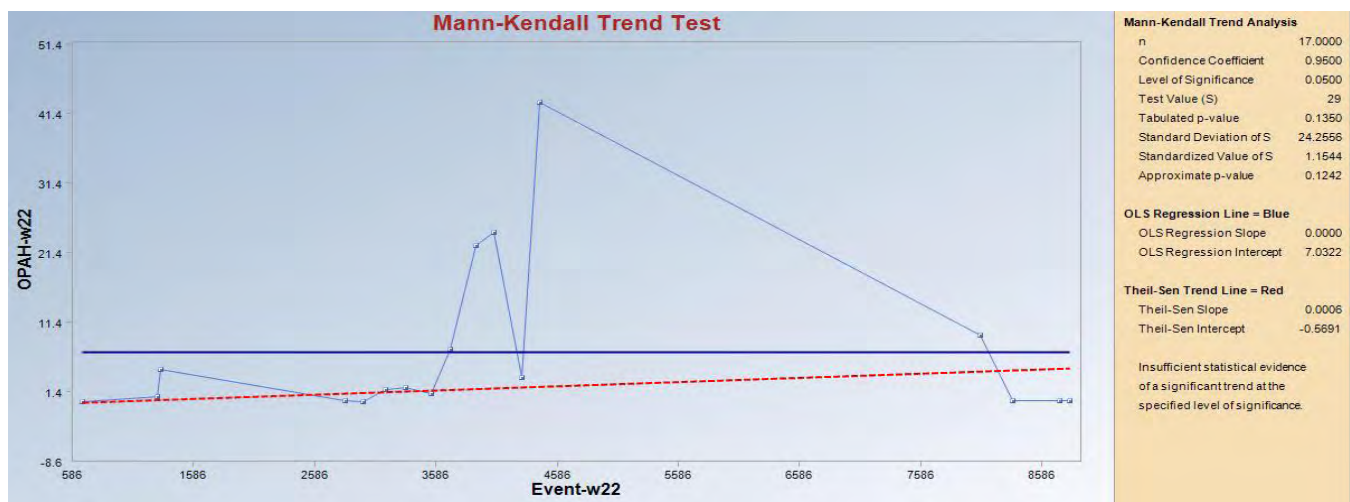
General Statistics

Number of Events	17
Number of Values	17
Minimum	0
Maximum	42.91
Mean	7.0763824
Geometric Mean	0
Median	1.635
Standard Deviation	11.902629
SEM	2.8868114

Mann-Kendall Test

Test Value (S)	29
Tabulated p-value	0.135
Standard Deviation of S	24.255584
Standardized Value of S	1.1543734
Approximate p-value	0.1241736

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W27

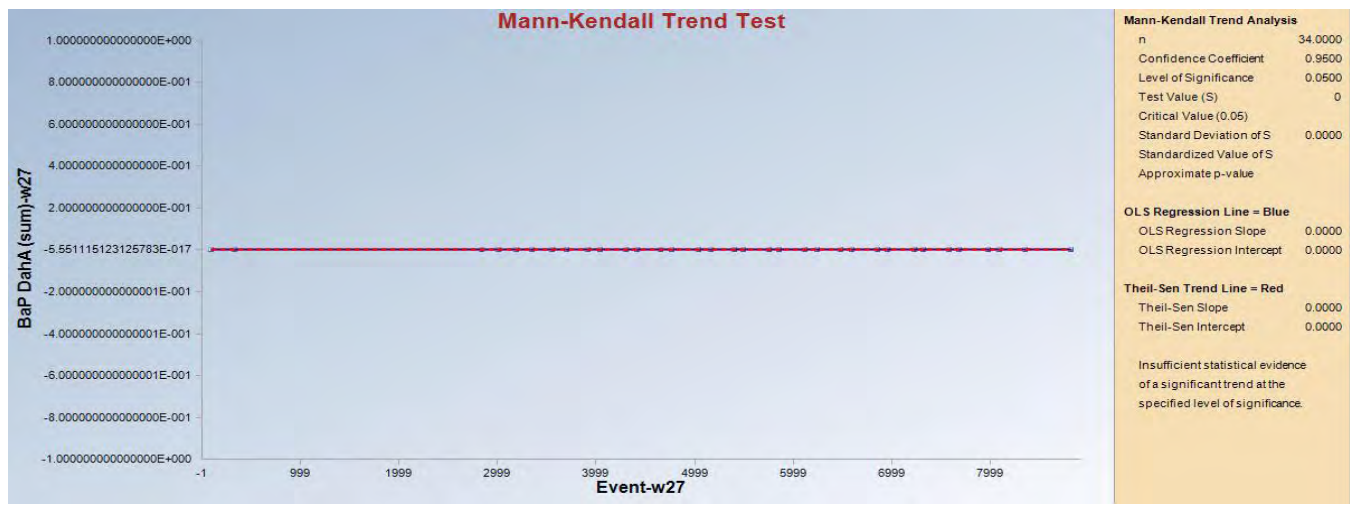
General Statistics

Number of Events	34
Number of Values	34
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W27

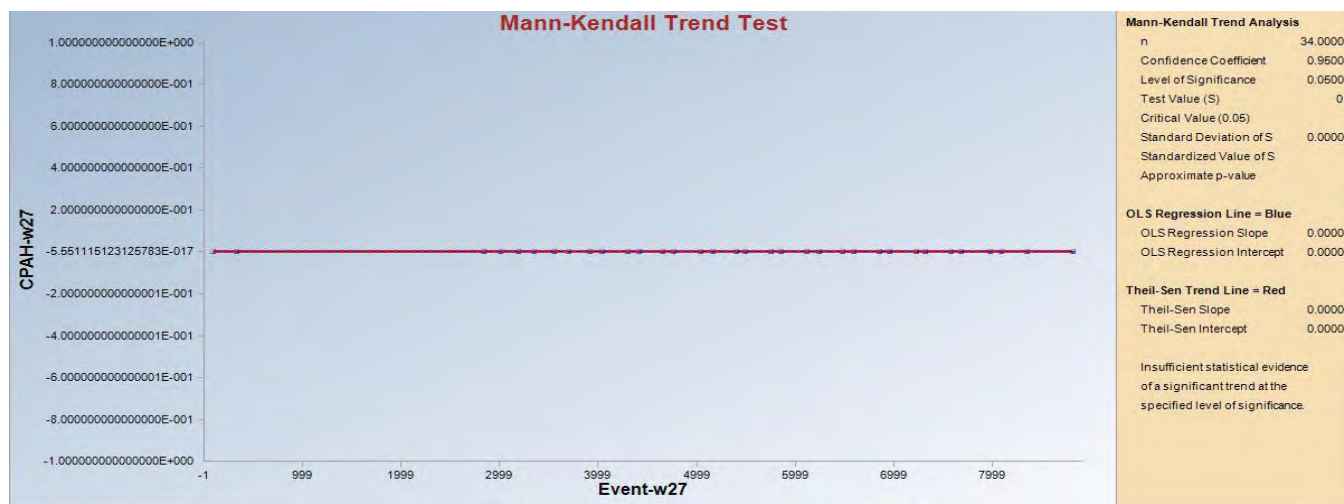
General Statistics

Number of Events	34
Number of Values	34
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W27

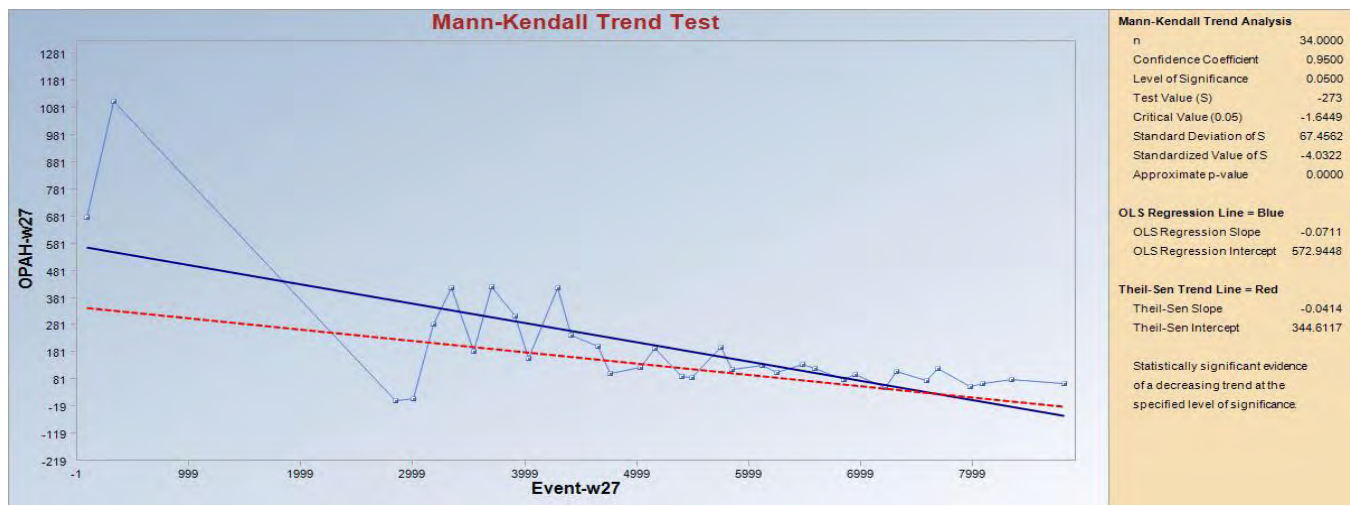
General Statistics

Number of Events	34
Number of Values	34
Minimum	1.4758
Maximum	1103
Mean	194.05861
Geometric Mean	120.10308
Median	119.1
Standard Deviation	213.8255
SEM	36.670771

Mann-Kendall Test

Test Value (S)	-273
Critical Value (0.05)	-1.644854
Standard Deviation of S	67.456159
Standardized Value of S	-4.032249
Approximate p-value	2.76E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W421

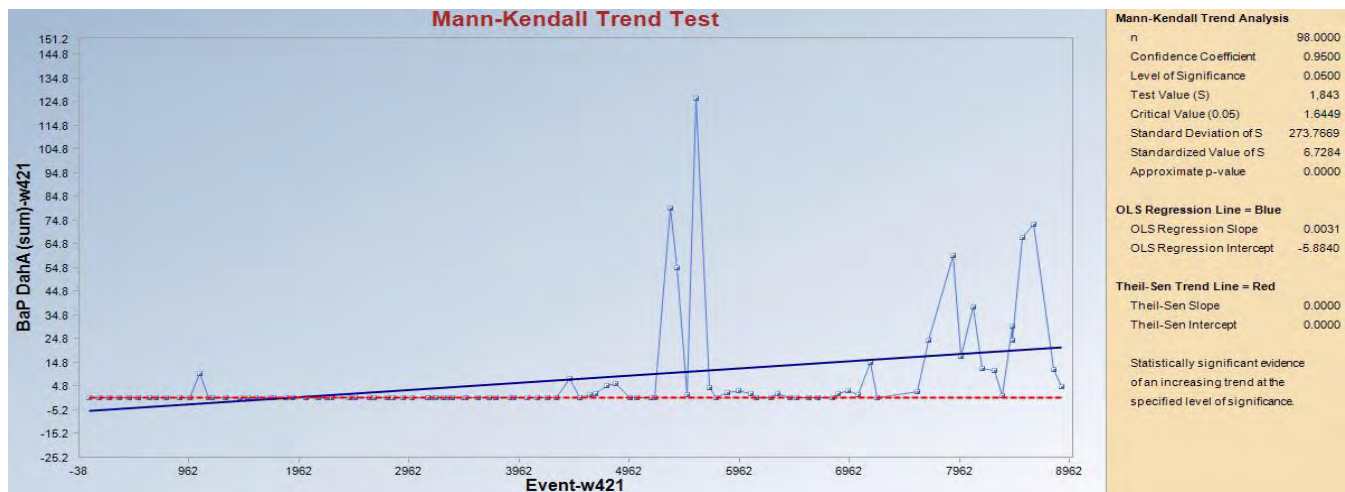
General Statistics

Number of Events	98
Number of Values	98
Minimum	0
Maximum	126
Mean	7.159898
Geometric Mean	0
Median	0
Standard Deviation	19.904958
SEM	2.0107044

Mann-Kendall Test

Test Value (S)	1843
Critical Value (0.05)	1.6448536
Standard Deviation of S	273.76693
Standardized Value of S	6.7283509
Approximate p-value	8.58E-12

Statistically significant evidence of an increasing trend at the specified level of significance.



CPAH (sum) - W421

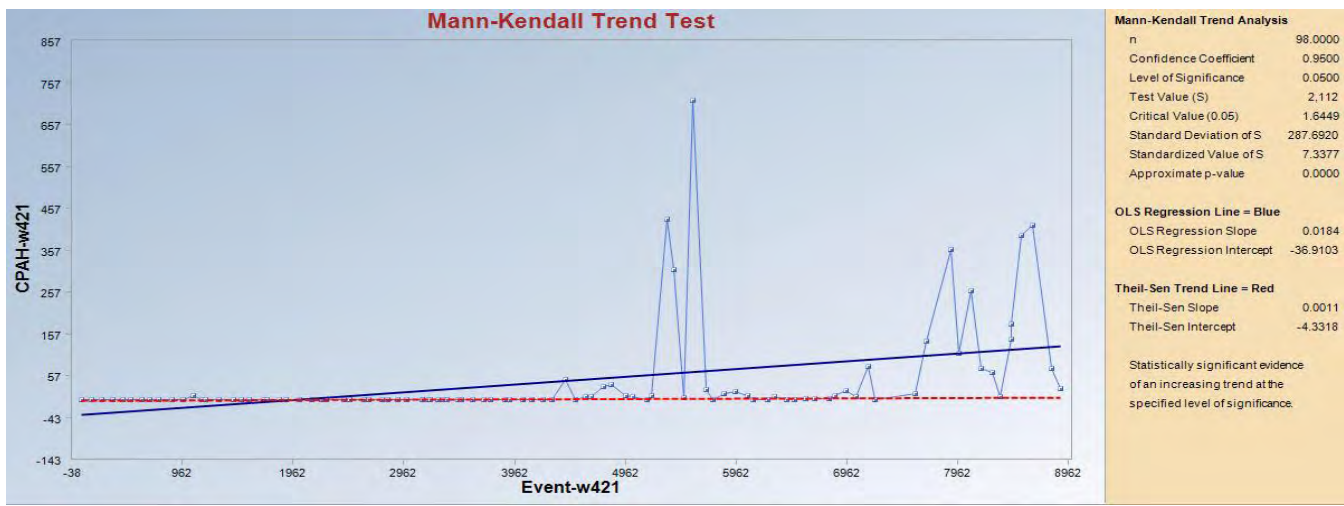
General Statistics

Number of Events	98
Number of Values	98
Minimum	0
Maximum	715
Mean	41.568776
Geometric Mean	0
Median	0
Standard Deviation	114.05002
SEM	11.520792

Mann-Kendall Test

Test Value (S)	2112
Critical Value (0.05)	1.6448536
Standard Deviation of S	287.69196
Standardized Value of S	7.3377093
Approximate p-value	1.09E-13

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W421

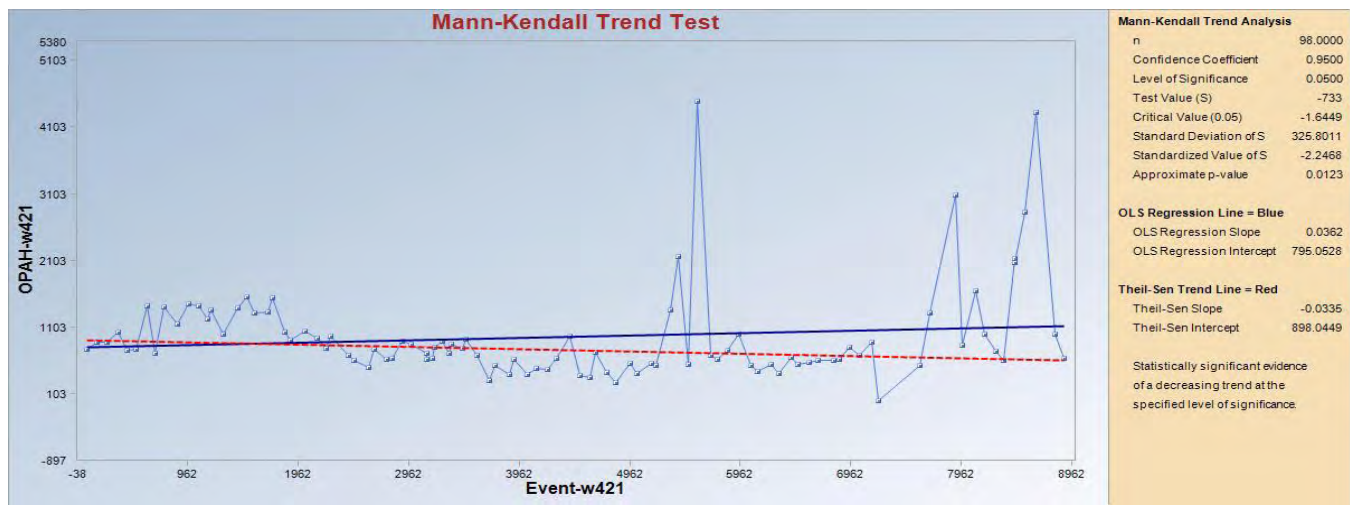
General Statistics

Number of Events	98
Number of Values	98
Minimum	0
Maximum	4483.5
Mean	949.80265
Geometric Mean	0
Median	761.485
Standard Deviation	705.07902
SEM	71.223736

Mann-Kendall Test

Test Value (S)	-733
Critical Value (0.05)	-1.644854
Standard Deviation of S	325.80106
Standardized Value of S	-2.24677
Approximate p-value	0.0123274

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W424

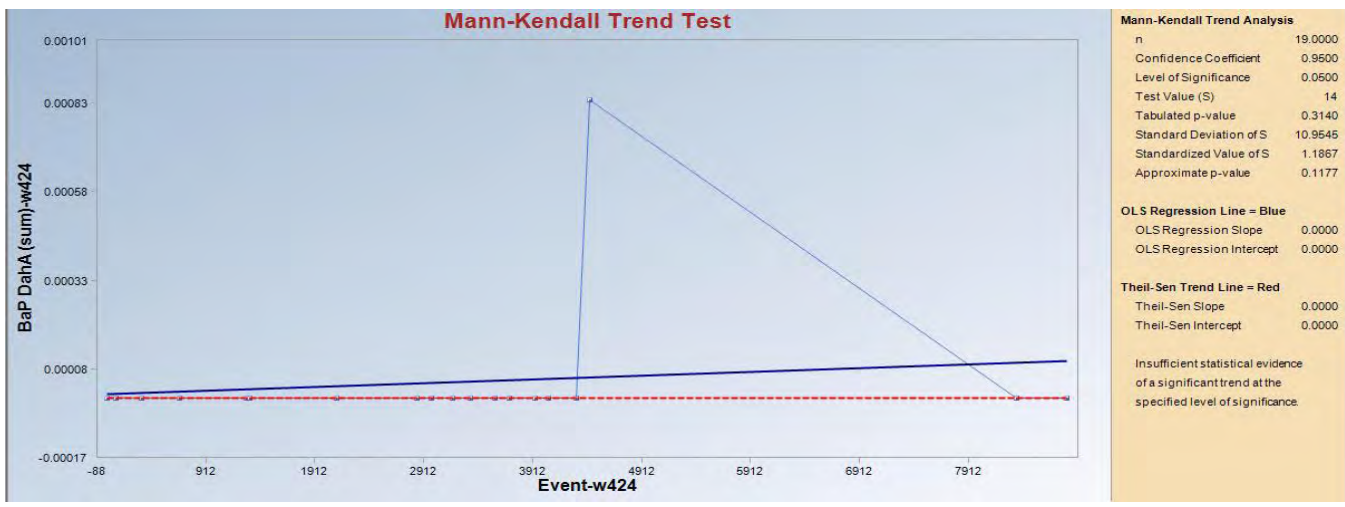
General Statistics

Number of Events	19
Number of Values	19
Minimum	0
Maximum	8.40E-04
Mean	4.42E-05
Geometric Mean	0
Median	0
Standard Deviation	1.93E-04
SEM	4.42E-05

Mann-Kendall Test

Test Value (S)	14
Tabulated p-value	0.314
Standard Deviation of S	10.954451
Standardized Value of S	1.1867322
Approximate p-value	0.1176666

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W424

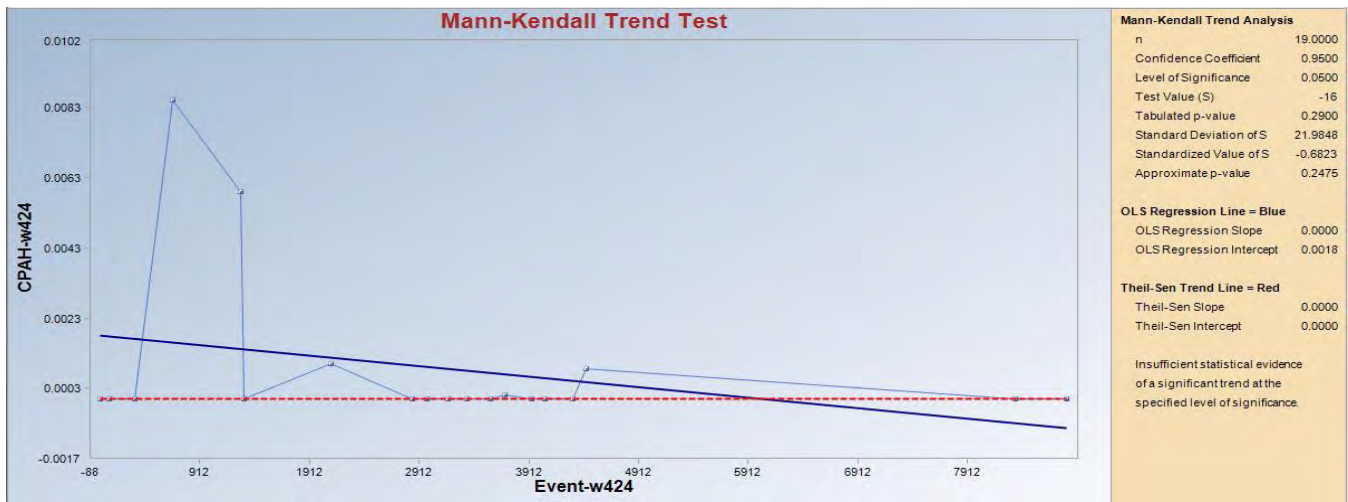
General Statistics

Number of Events	19
Number of Values	19
Minimum	0
Maximum	0.0085
Mean	8.60E-04
Geometric Mean	0
Median	0
Standard Deviation	0.002294
SEM	5.26E-04

Mann-Kendall Test

Test Value (S)	-16
Tabulated p-value	0.29
Standard Deviation of S	21.984843
Standardized Value of S	-0.682288
Approximate p-value	0.2475284

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W424

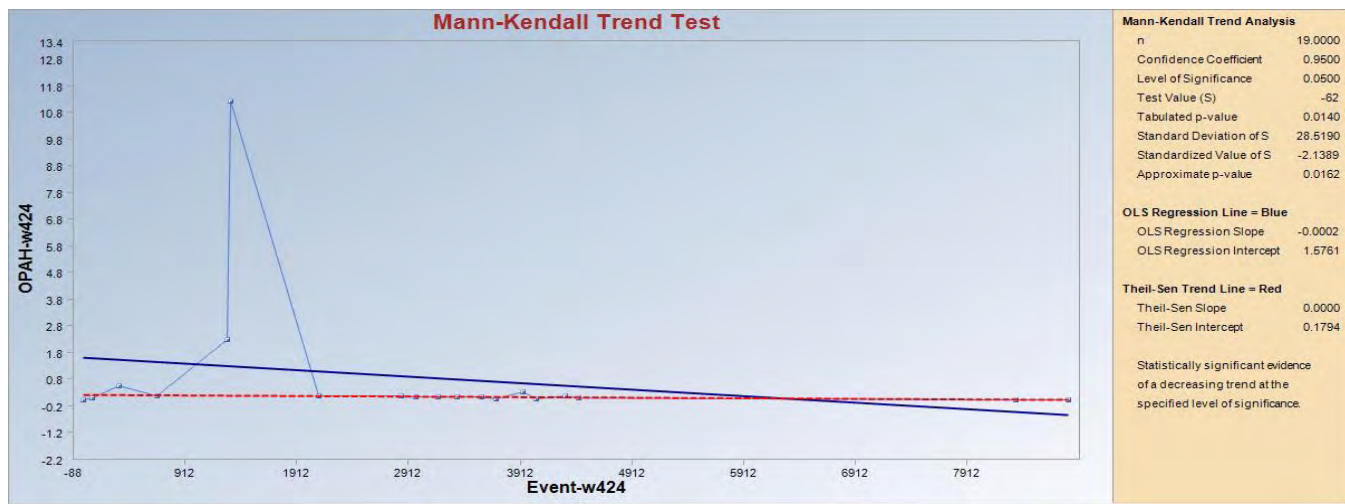
General Statistics

Number of Events	19
Number of Values	19
Minimum	0
Maximum	11.18
Mean	0.8112716
Geometric Mean	0
Median	0.1086
Standard Deviation	2.5606072
SEM	0.5874436

Mann-Kendall Test

Test Value (S)	-62
Tabulated p-value	0.014
Standard Deviation of S	28.519
Standardized Value of S	-2.138925
Approximate p-value	0.0162209

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W426

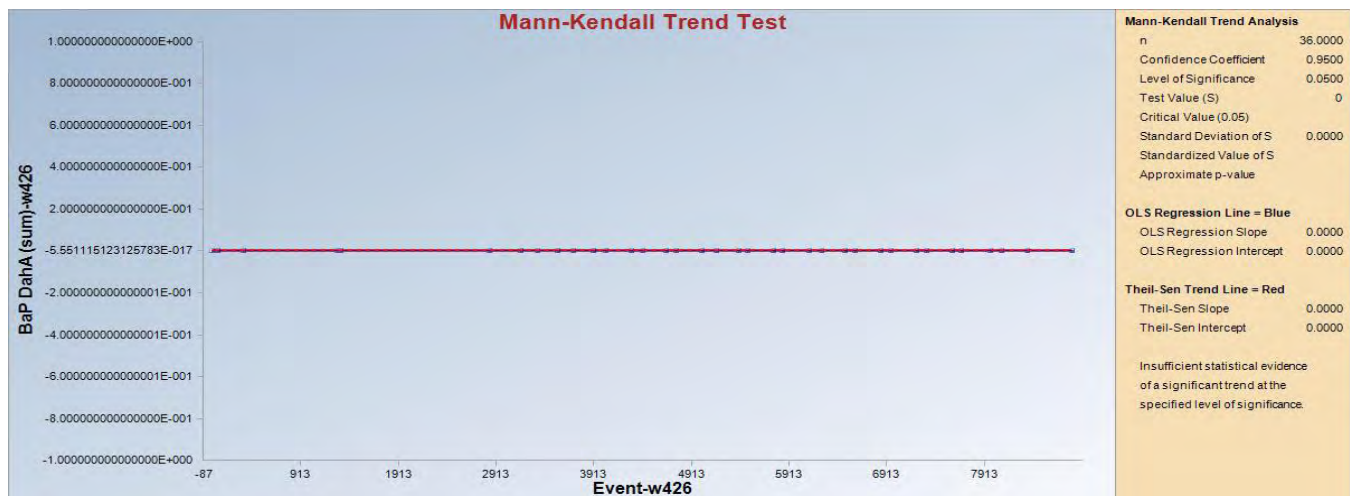
General Statistics

Number of Events	36
Number of Values	36
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W426

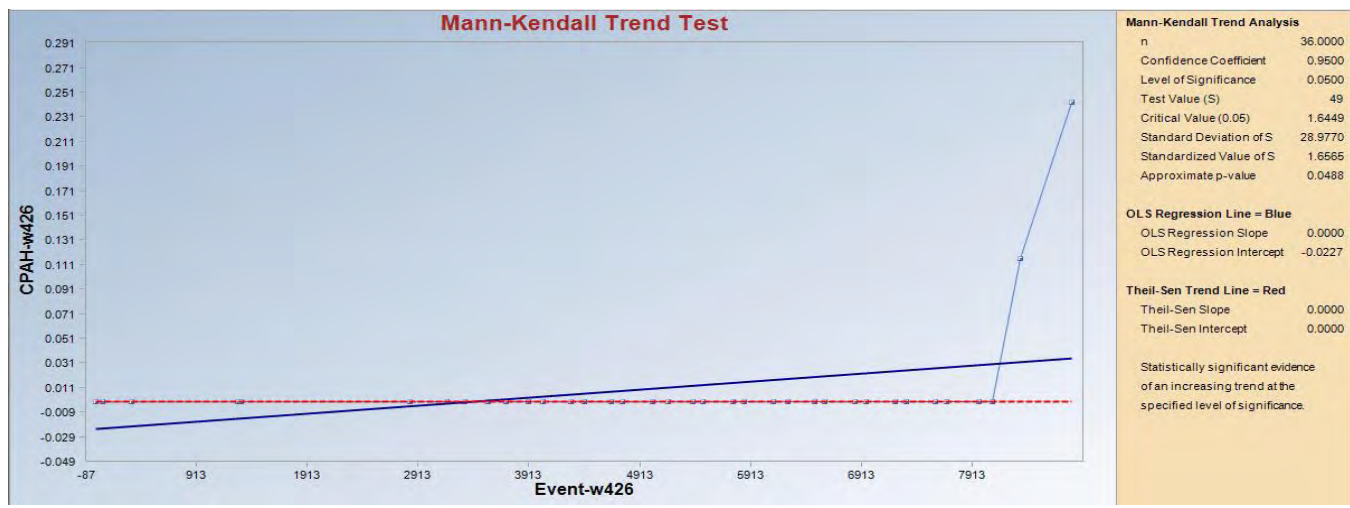
General Statistics

Number of Events	36
Number of Values	36
Minimum	0
Maximum	0.243
Mean	0.0099722
Geometric Mean	0
Median	0
Standard Deviation	0.0443766
SEM	0.0073961

Mann-Kendall Test

Test Value (S)	49
Critical Value (0.05)	1.6448536
Standard Deviation of S	28.977002
Standardized Value of S	1.656486
Approximate p-value	0.0488117

Statistically significant evidence of an increasing trend at the specified level of significance.



OPAH (sum) - W426

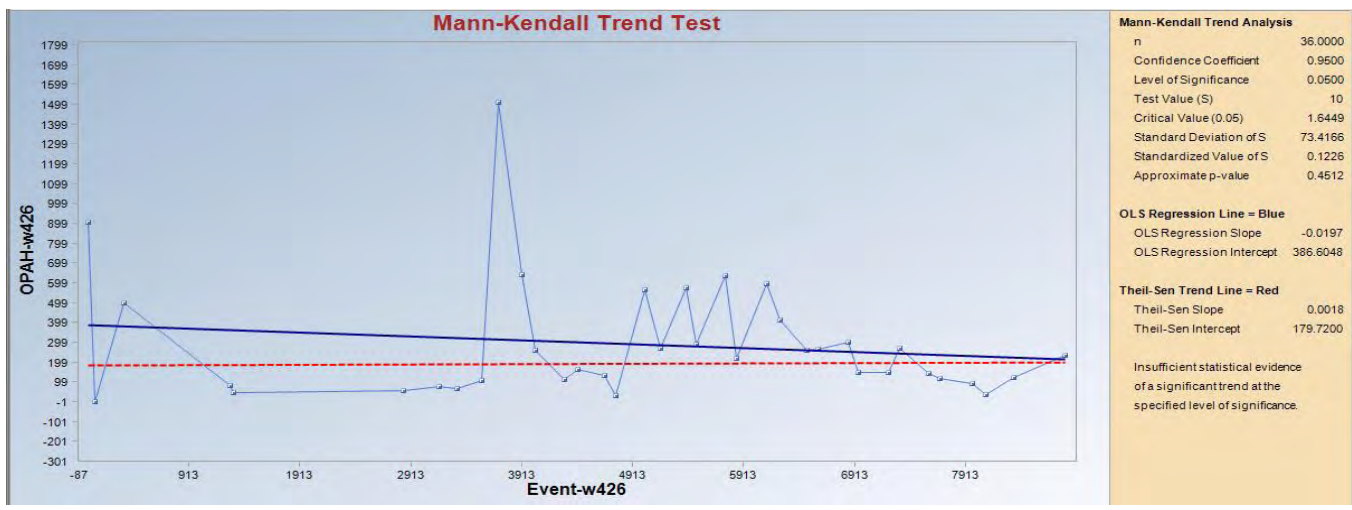
General Statistics

Number of Events	36
Number of Values	36
Minimum	0.6388
Maximum	1507.9
Mean	287.5558
Geometric Mean	166.44442
Median	189.045
Standard Deviation	300.56972
SEM	50.094953

Mann-Kendall Test

Test Value (S)	10
Critical Value (0.05)	1.6448536
Standard Deviation of S	73.416619
Standardized Value of S	0.122588
Approximate p-value	0.4512167

Insufficient evidence to identify a significant trend at the specified level of significance.



BaP DahA (sum) - W428

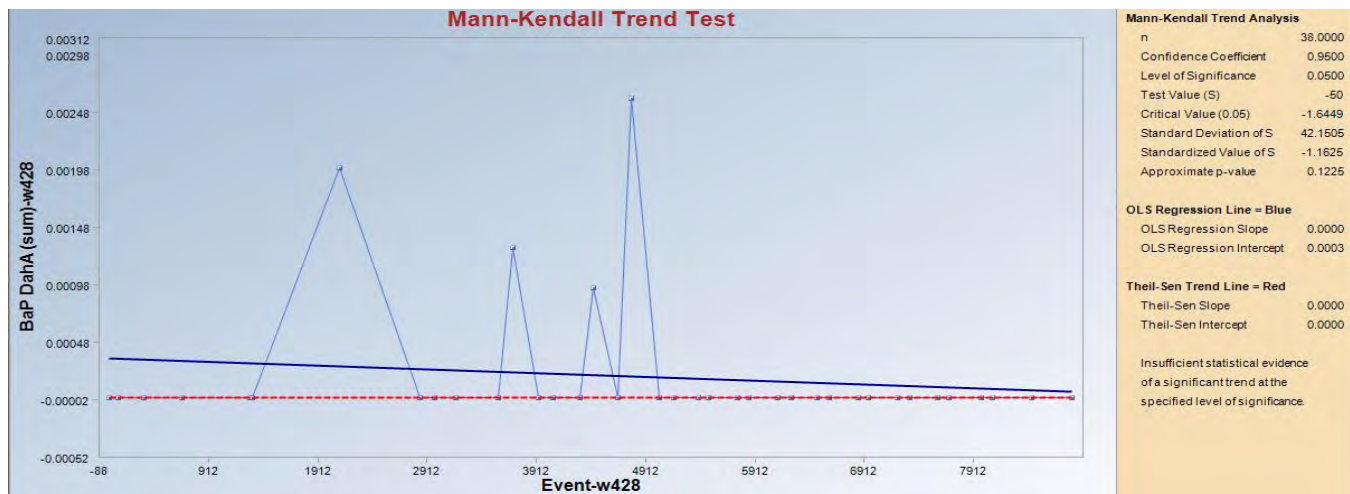
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	0.0026
Mean	1.80E-04
Geometric Mean	0
Median	0
Standard Deviation	5.72E-04
SEM	9.28E-05

Mann-Kendall Test

Test Value (S)	-50
Critical Value (0.05)	-1.644854
Standard Deviation of S	42.150524
Standardized Value of S	-1.1625
Approximate p-value	0.1225161

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W428

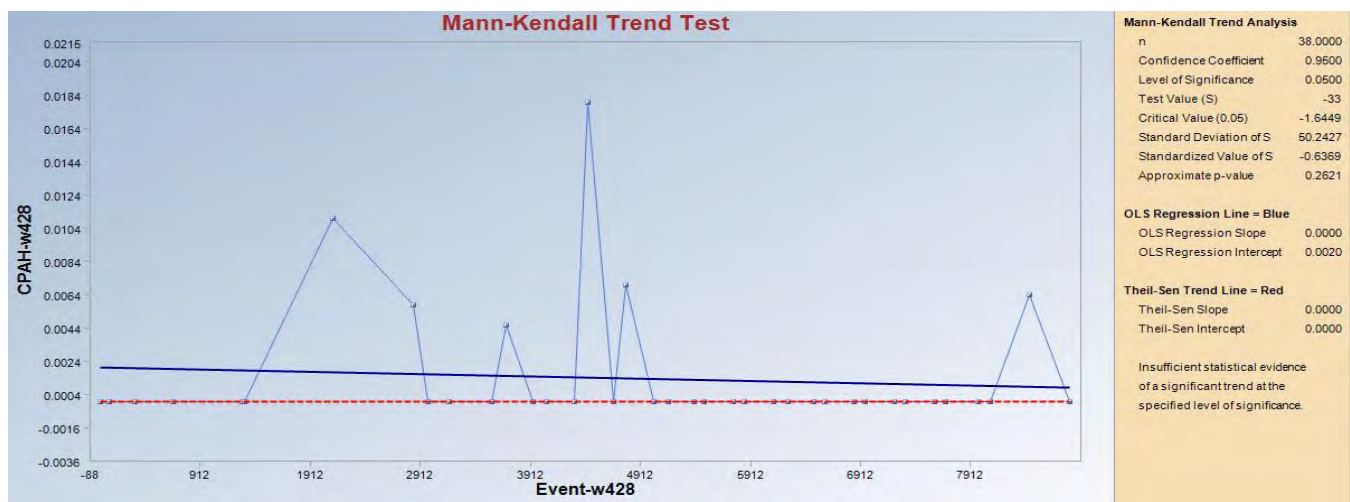
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	0.01795
Mean	0.0013884
Geometric Mean	0
Median	0
Standard Deviation	0.0037301
SEM	6.05E-04

Mann-Kendall Test

Test Value (S)	-33
Critical Value (0.05)	-1.644854
Standard Deviation of S	50.242744
Standardized Value of S	-0.636908
Approximate p-value	0.2620924

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W428

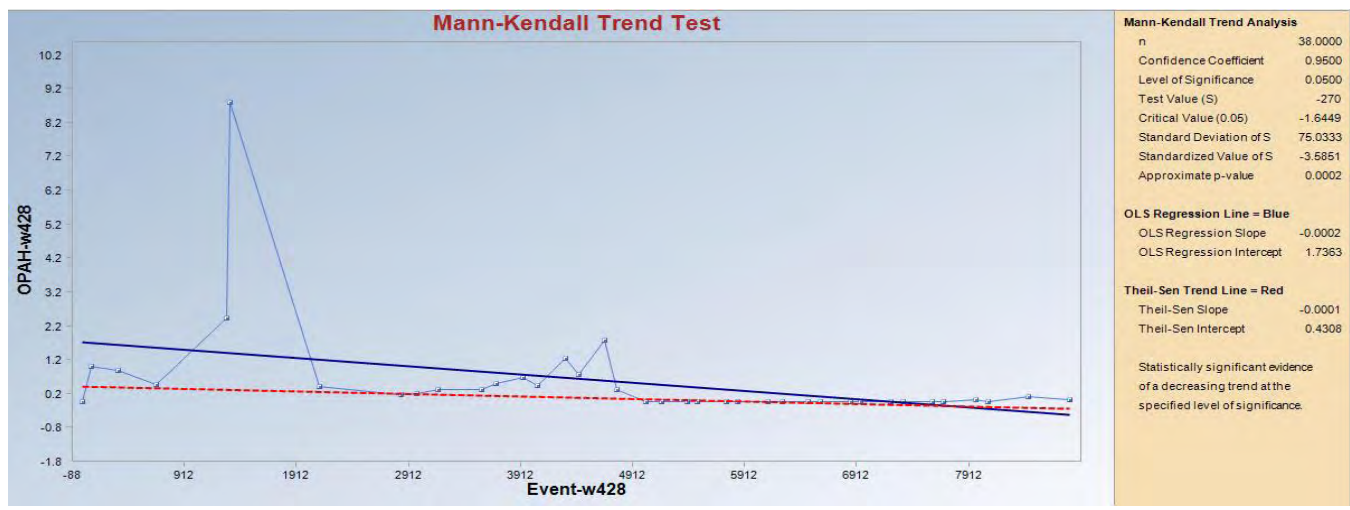
General Statistics

Number of Events	38
Number of Values	38
Minimum	0
Maximum	8.816
Mean	0.5634789
Geometric Mean	0
Median	0.056
Standard Deviation	1.4793224
SEM	0.2399778

Mann-Kendall Test

Test Value (S)	-270
Critical Value (0.05)	-1.644854
Standard Deviation of S	75.033326
Standardized Value of S	-3.585074
Approximate p-value	1.68E-04

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W434

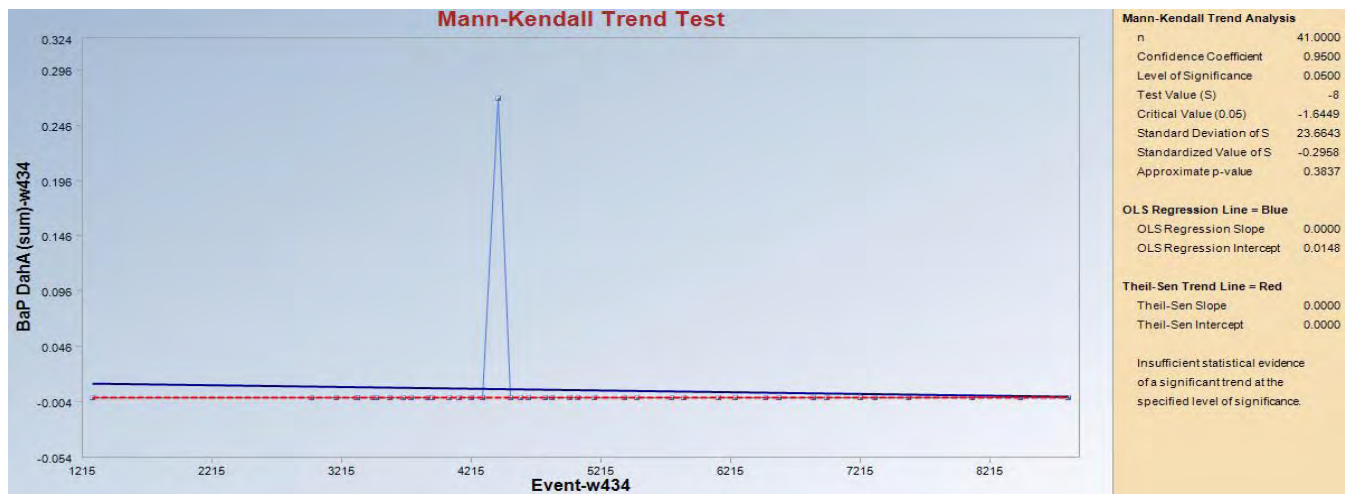
General Statistics

Number of Events	41
Number of Values	41
Minimum	0
Maximum	0.27
Mean	0.0065854
Geometric Mean	0
Median	0
Standard Deviation	0.0421669
SEM	0.0065854

Mann-Kendall Test

Test Value (S)	-8
Critical Value (0.05)	-1.644854
Standard Deviation of S	23.664319
Standardized Value of S	-0.295804
Approximate p-value	0.3836899

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W434

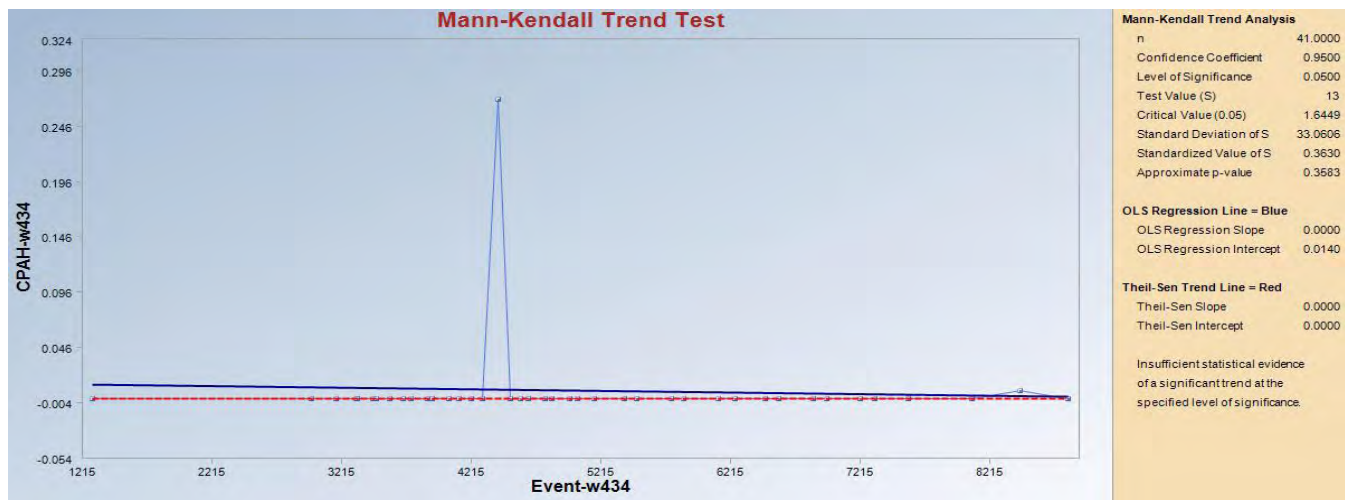
General Statistics

Number of Events	41
Number of Values	41
Minimum	0
Maximum	0.27
Mean	0.0067512
Geometric Mean	0
Median	0
Standard Deviation	0.0421537
SEM	0.0065833

Mann-Kendall Test

Test Value (S)	13
Critical Value (0.05)	1.6448536
Standard Deviation of S	33.060551
Standardized Value of S	0.3629704
Approximate p-value	0.3583135

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W434

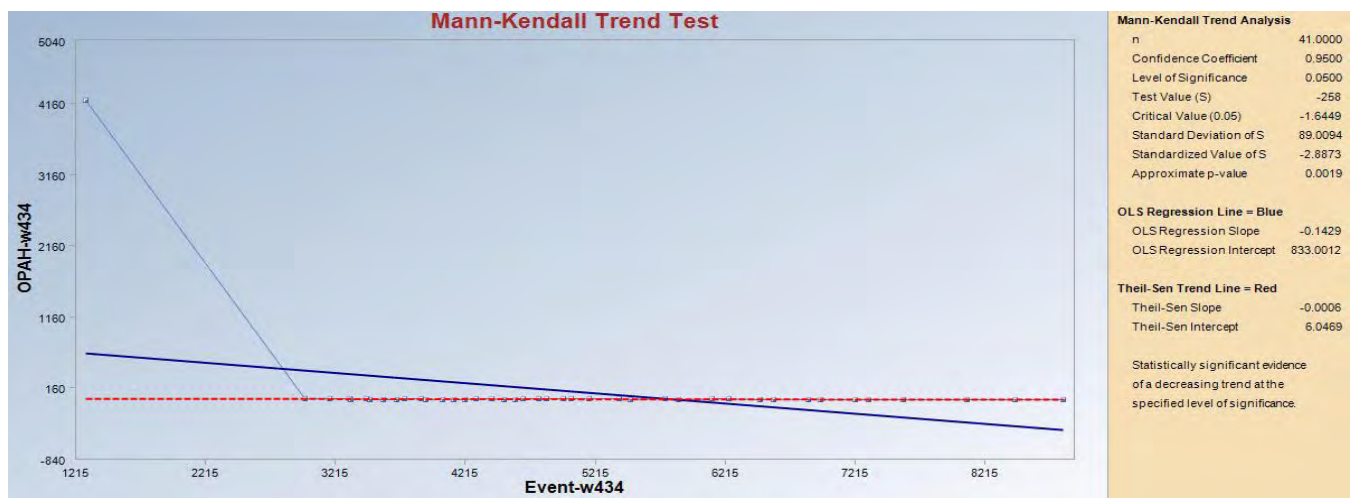
General Statistics

Number of Events	41
Number of Values	41
Minimum	0
Maximum	4200
Mean	105.83158
Geometric Mean	0
Median	3
Standard Deviation	655.39213
SEM	102.35505

Mann-Kendall Test

Test Value (S)	-258
Critical Value (0.05)	-1.644854
Standard Deviation of S	89.009363
Standardized Value of S	-2.887337
Approximate p-value	0.0019426

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W437

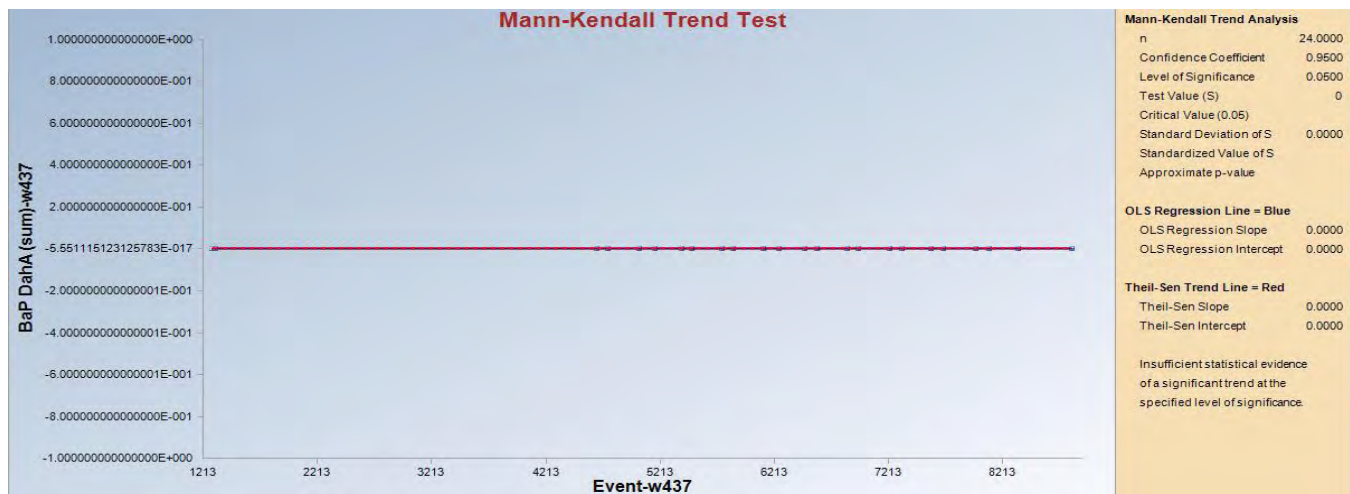
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W437

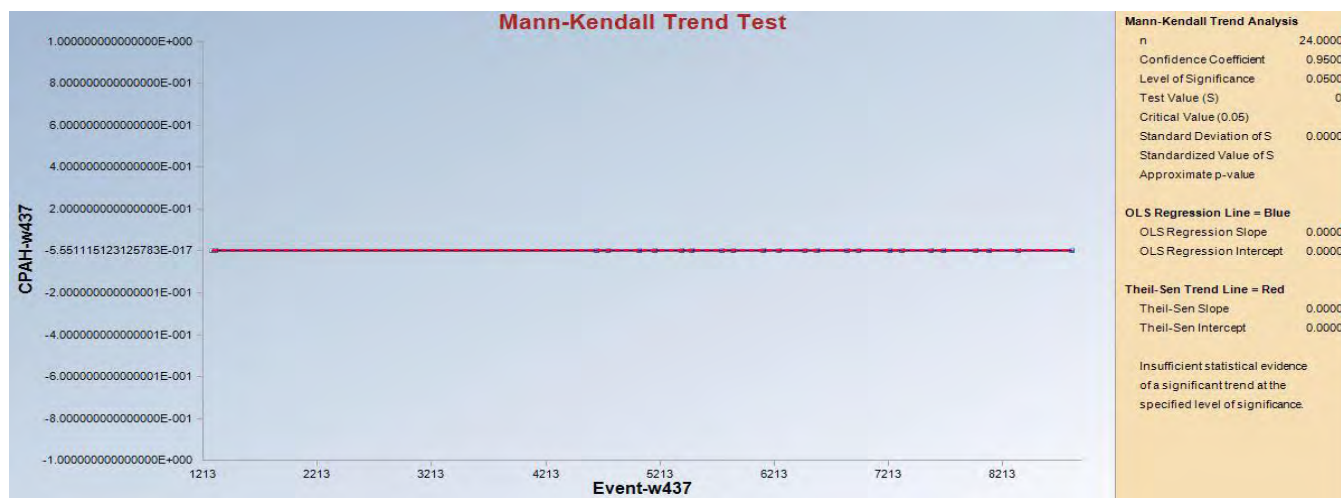
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W437

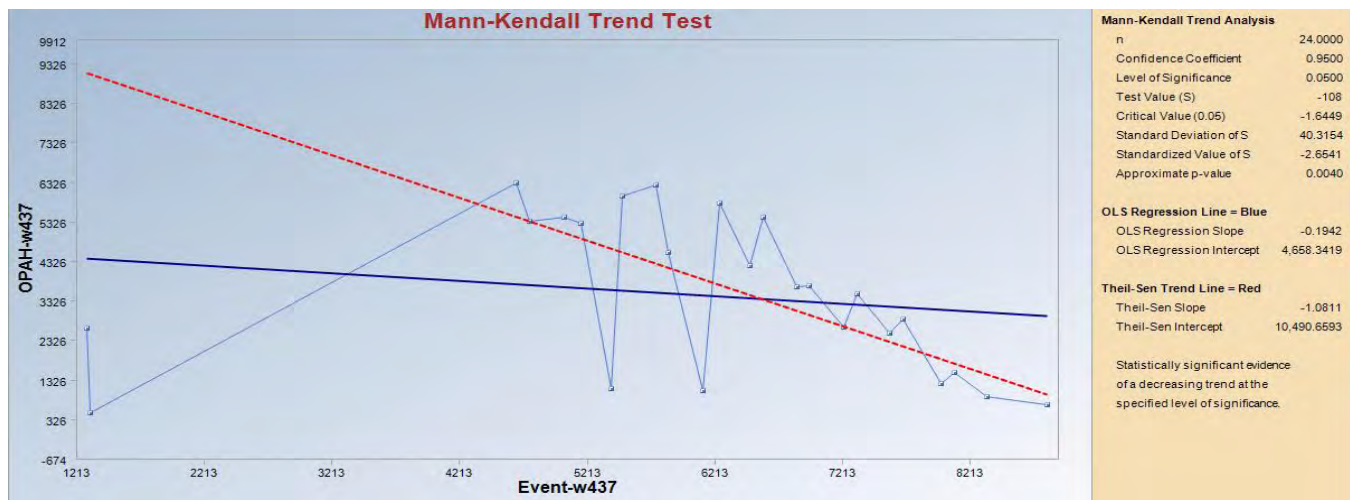
General Statistics

Number of Events	24
Number of Values	24
Minimum	488.8
Maximum	6305.1
Mean	3468.75
Geometric Mean	2755.1919
Median	3609.4
Standard Deviation	1977.3171
SEM	403.61817

Mann-Kendall Test

Test Value (S)	-108
Critical Value (0.05)	-1.644854
Standard Deviation of S	40.315423
Standardized Value of S	-2.654071
Approximate p-value	0.0039764

Statistically significant evidence of a decreasing trend at the specified level of significance.



BaP DahA (sum) - W438**General Statistics**

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.182
Mean	0.01168
Geometric Mean	0
Median	0
Standard Deviation	0.04174
SEM	0.008348

Mann-Kendall Test

Test Value (S)	-37
Critical Value (0.05)	-1.644854
Standard Deviation of S	19.991665
Standardized Value of S	-1.80075
Approximate p-value	0.0358711

Statistically significant evidence of a decreasing trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - W438

General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.555
Mean	0.04248
Geometric Mean	0
Median	0
Standard Deviation	0.1471904
SEM	0.0294381

Mann-Kendall Test

Test Value (S)	-21
Critical Value (0.05)	-1.644854
Standard Deviation of S	19.991665
Standardized Value of S	-1.000417
Approximate p-value	0.1585544

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

OPAH (sum) - W438

General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	20.4
Mean	1.108072
Geometric Mean	0
Median	0
Standard Deviation	4.1358631
SEM	0.8271726

Mann-Kendall Test

Test Value (S)	-53
Critical Value (0.05)	-1.644854
Standard Deviation of S	31.879983
Standardized Value of S	-1.631118
Approximate p-value	0.0514328

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

Summary of Statistical PAH Trends

Drift					
Well ID	Well Type	Number of Samples	Bap DahA (sum)	CPAH (sum)	OPAH (sum)
P109	Monitoring		No Change	No Change	Decreasing
P112	Monitoring		No Change	Decreasing	Decreasing
P307	Monitoring		No Change	No Change	Decreasing
P308	Monitoring		No Change	No Change	No Change
P309	Monitoring		No Change	No Change	Decreasing
P310	Monitoring		No Change	No Change	Decreasing
W312	Monitoring		No Change	No Change	Decreasing
W10	Monitoring		No Change	No Change	No Change
W117	Monitoring		No Change	No Change	Decreasing
W128	Monitoring		No Change	No Change	Decreasing
W136	Monitoring		No Change	Decreasing	No Change
W15	Monitoring		No Change	No Change	Decreasing
W2	Monitoring		No Change	No Change	No Change
W420	Pumping		Increasing	No Change	No Change
W422	Monitoring		No Change	No Change	Decreasing
W427	Monitoring		No Change	No Change	Decreasing
W439	Pumping		No Change	No Change	Decreasing
W9	Monitoring		No Change	No Change	No Change

Bap DahA (sum) - P109

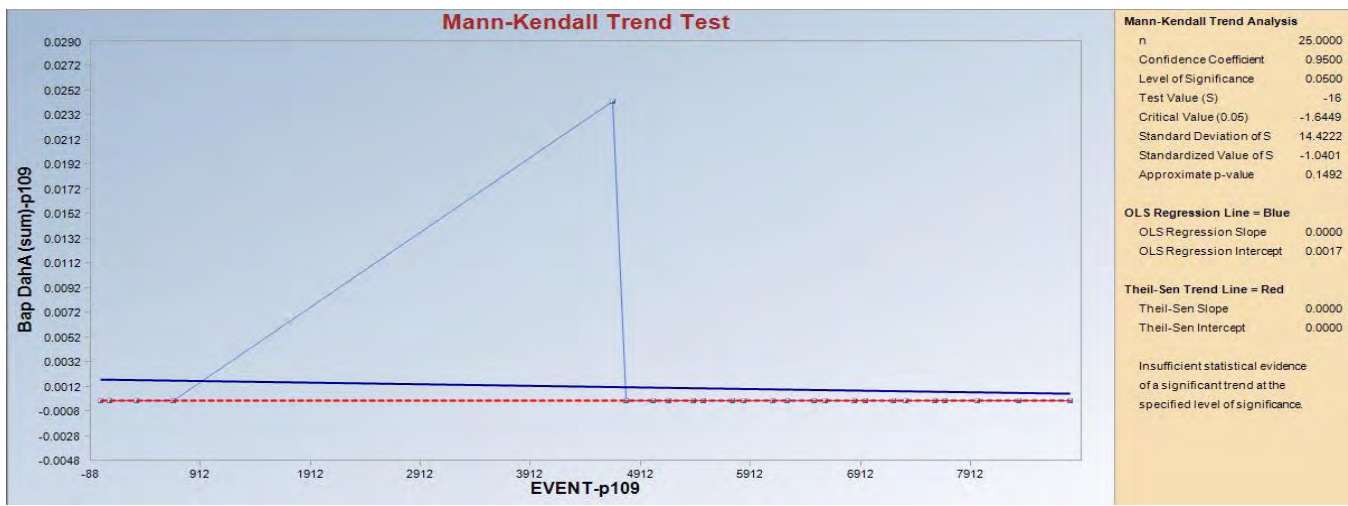
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0242
Mean	9.68E-04
Geometric Mean	0
Median	0
Standard Deviation	0.00484
SEM	9.68E-04

Mann-Kendall Test

Test Value (S)	-16
Critical Value (0.05)	-1.644854
Standard Deviation of S	14.422205
Standardized Value of S	-1.040063
Approximate p-value	0.1491553

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P109

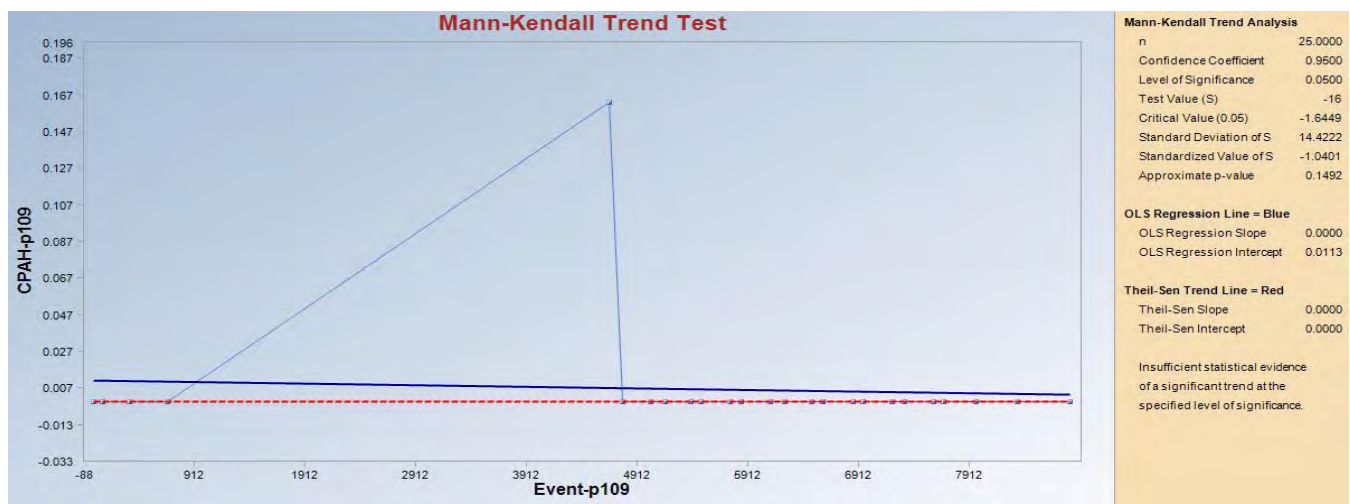
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.1632
Mean	0.006528
Geometric Mean	0
Median	0
Standard Deviation	0.03264
SEM	0.006528

Mann-Kendall Test

Test Value (S)	-16
Critical Value (0.05)	-1.644854
Standard Deviation of S	14.422205
Standardized Value of S	-1.040063
Approximate p-value	0.1491553

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P109

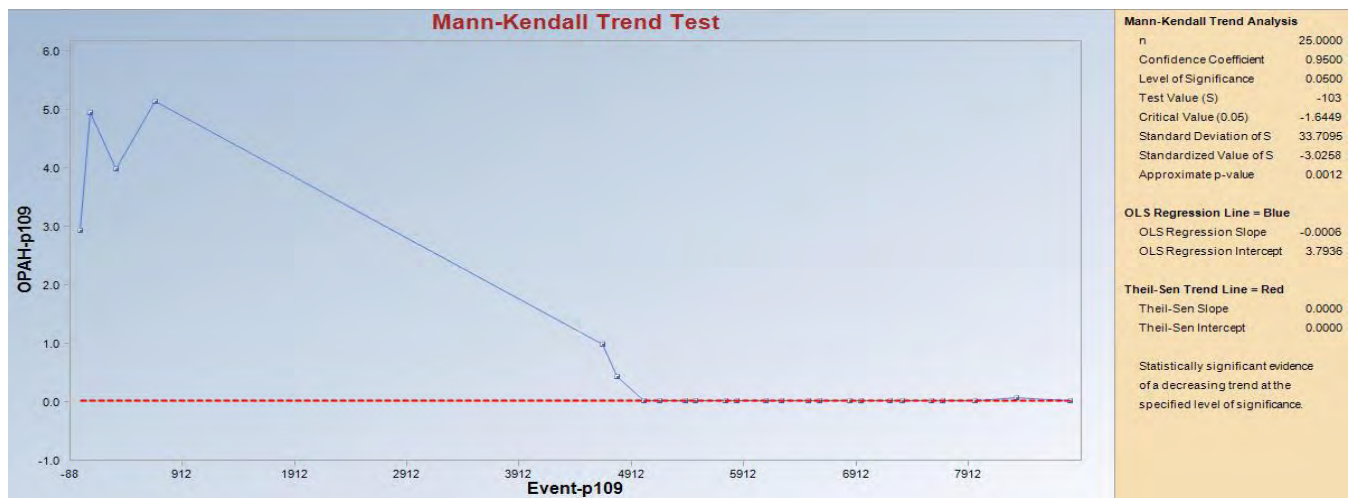
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	5.11
Mean	0.73194
Geometric Mean	0
Median	0
Standard Deviation	1.6086186
SEM	0.3217237

Mann-Kendall Test

Test Value (S)	-103
Critical Value (0.05)	-1.644854
Standard Deviation of S	33.709544
Standardized Value of S	-3.025849
Approximate p-value	0.0012397

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - P112

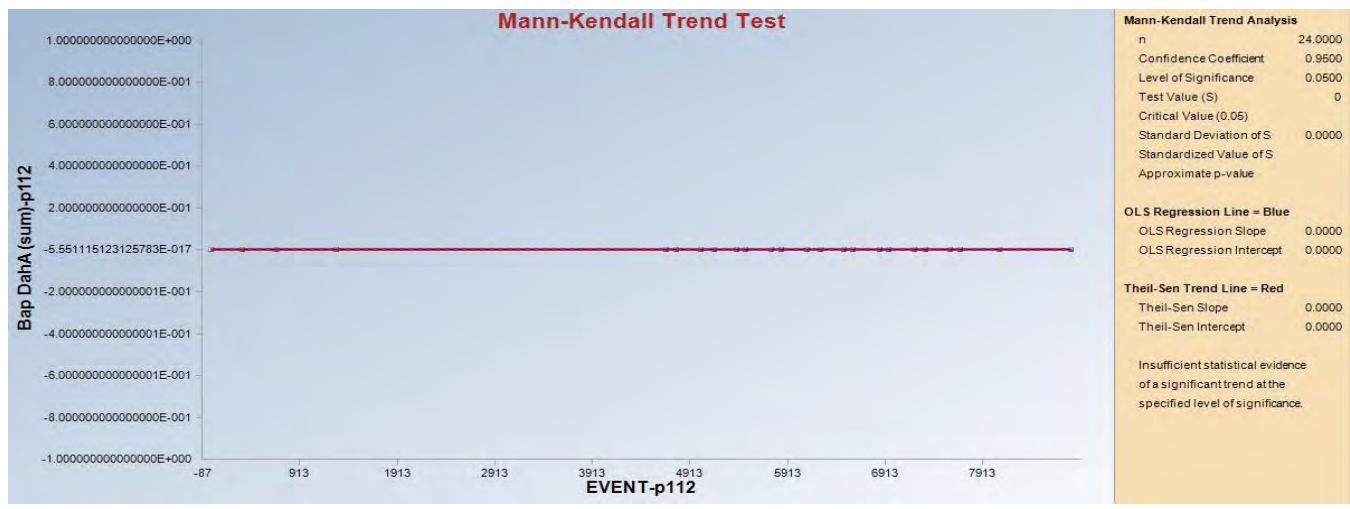
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P112

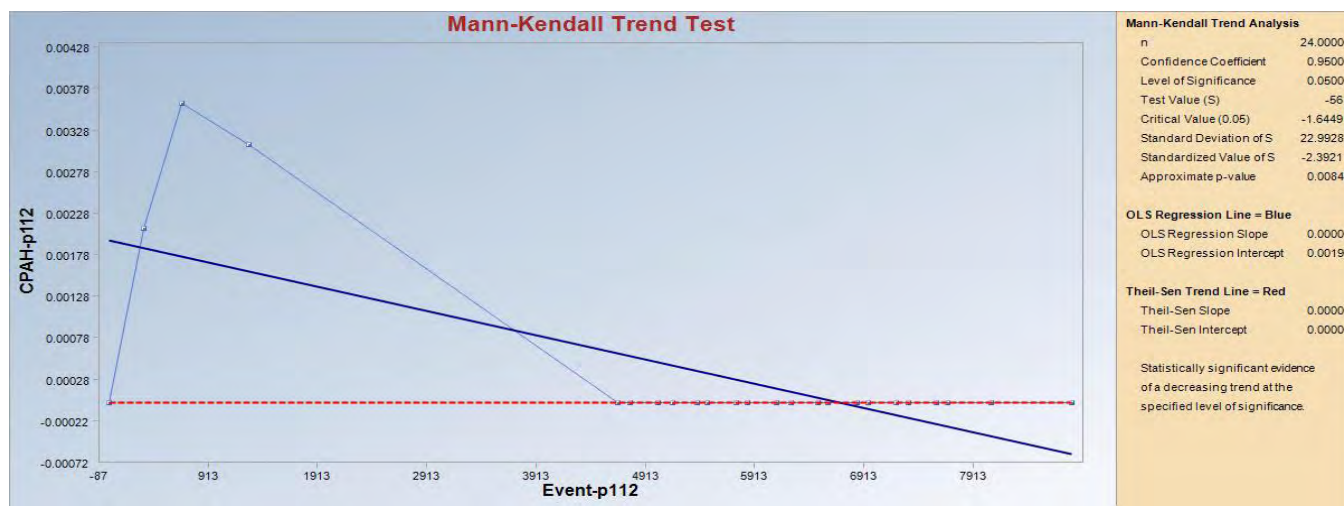
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0.0036
Mean	3.67E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0010162
SEM	2.07E-04

Mann-Kendall Test

Test Value (S)	-56
Critical Value (0.05)	-1.644854
Standard Deviation of S	22.992752
Standardized Value of S	-2.392058
Approximate p-value	0.0083771

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - P112

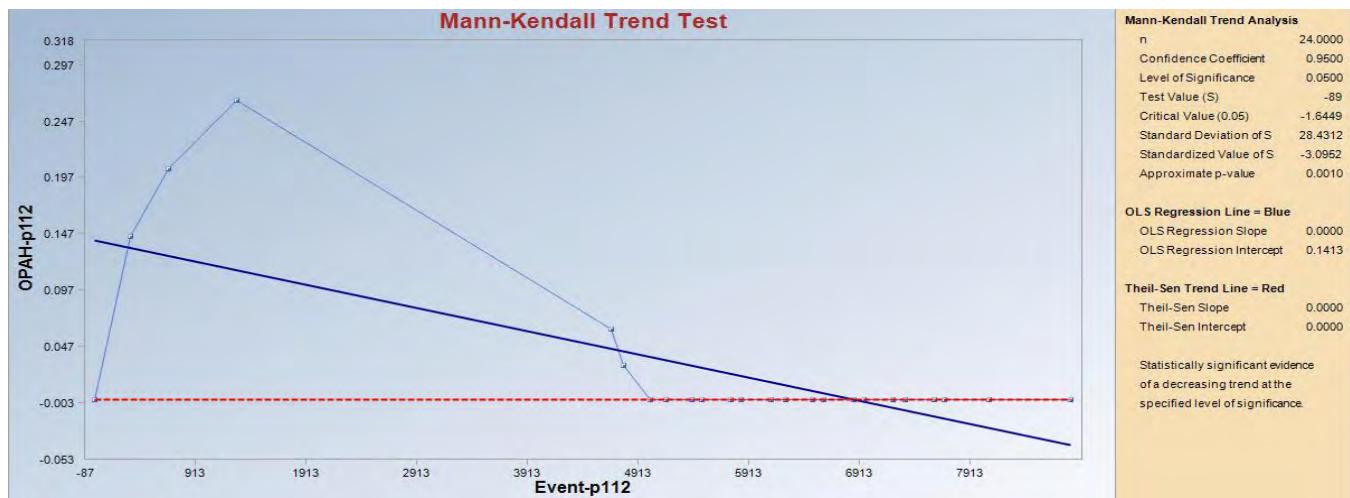
General Statistics

Number of Events	24
Number of Values	24
Minimum	0
Maximum	0.2651
Mean	0.0294667
Geometric Mean	0
Median	0
Standard Deviation	0.0713779
SEM	0.01457

Mann-Kendall Test

Test Value (S)	-89
Critical Value (0.05)	-1.644854
Standard Deviation of S	28.431204
Standardized Value of S	-3.095191
Approximate p-value	9.83E-04

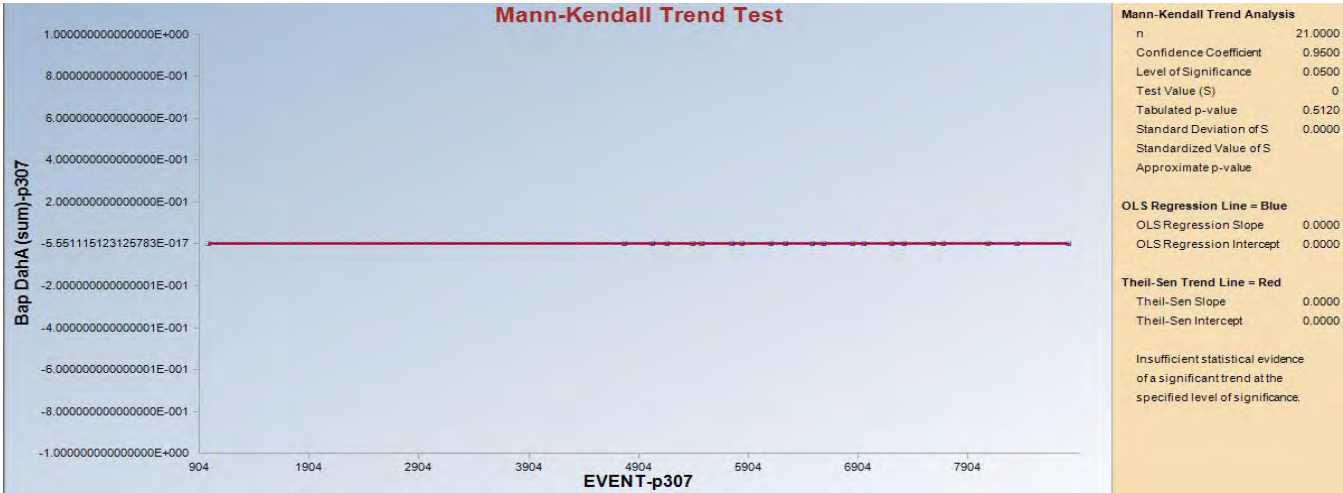
Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - P307

General Statistics		
Number of Events		21
Number of Values		21
Minimum		0
Maximum		0
Mean		0
Geometric Mean		0
Median		0
Standard Deviation		0
SEM		0
Mann-Kendall Test		
Test Value (S)		0
Tabulated p-value		0.512
Standard Deviation of S		0
Standardized Value of S	N/A	
Approximate p-value	N/A	

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P307

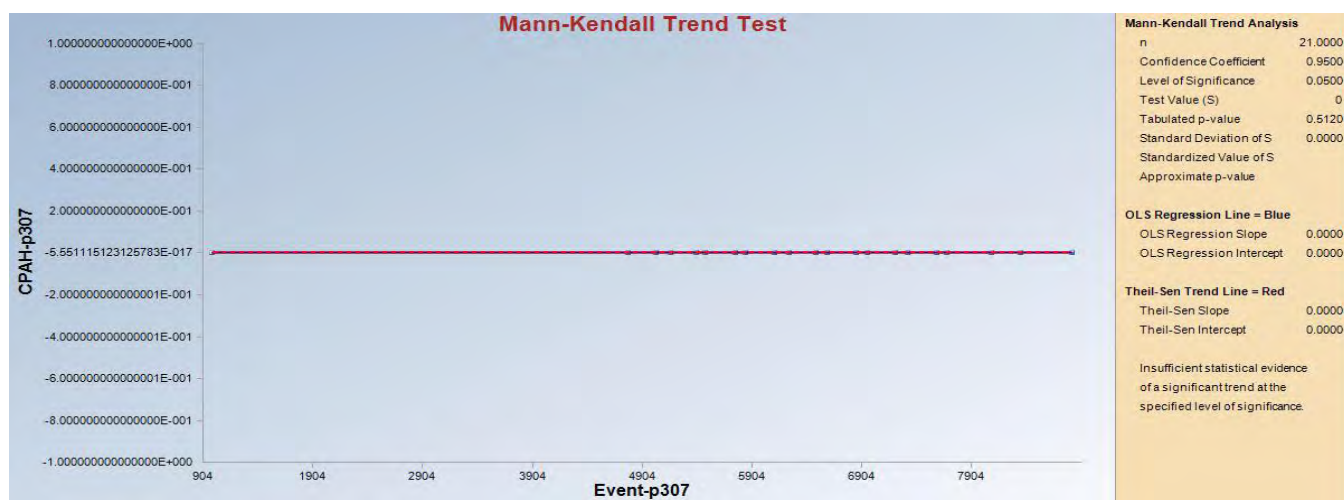
General Statistics

Number of Events	21
Number of Values	21
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.512
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P307

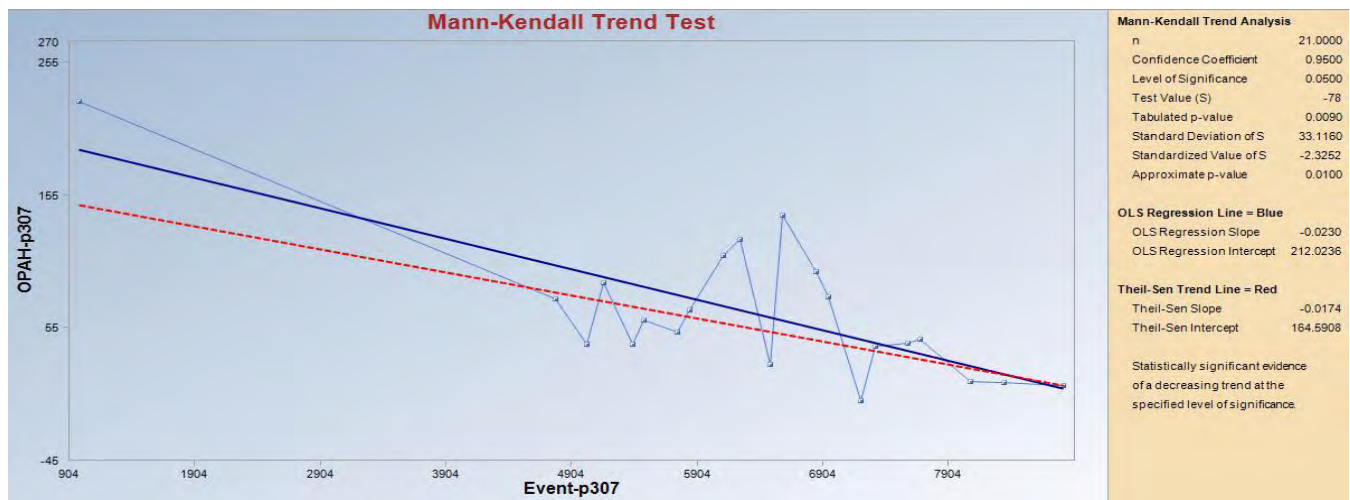
General Statistics

Number of Events	21
Number of Values	21
Minimum	0
Maximum	225.4
Mean	66.606429
Geometric Mean	0
Median	51.6
Standard Deviation	52.347137
SEM	11.423082

Mann-Kendall Test

Test Value (S)	-78
Tabulated p-value	0.009
Standard Deviation of S	33.115958
Standardized Value of S	-2.325163
Approximate p-value	0.0100316

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - P308

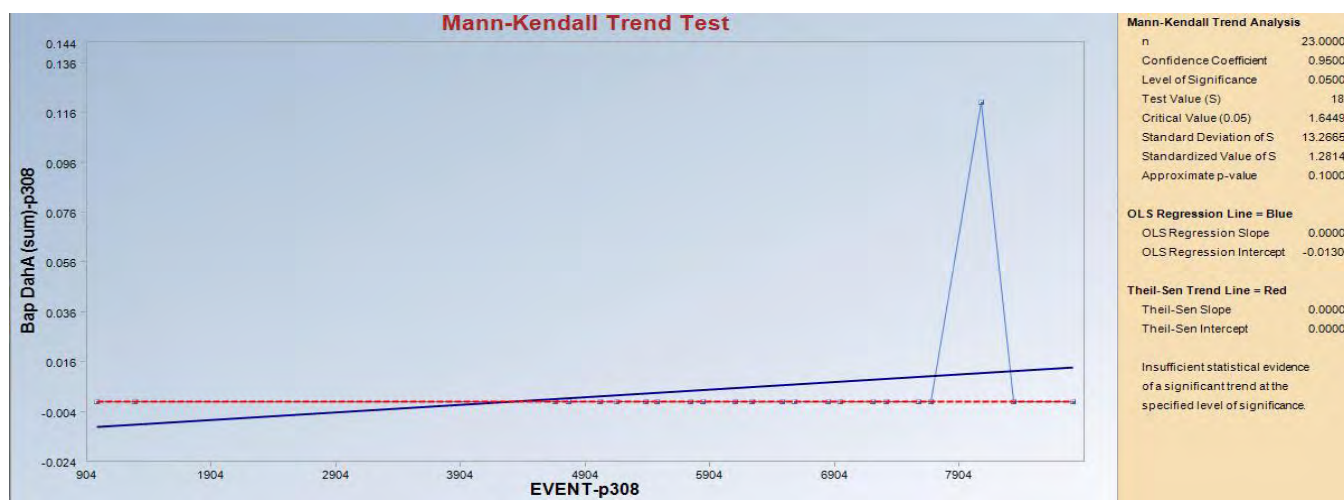
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.12
Mean	0.0052174
Geometric Mean	0
Median	0
Standard Deviation	0.0250217
SEM	0.0052174

Mann-Kendall Test

Test Value (S)	18
Critical Value (0.05)	1.6448536
Standard Deviation of S	13.266499
Standardized Value of S	1.2814232
Approximate p-value	0.1000225

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P308

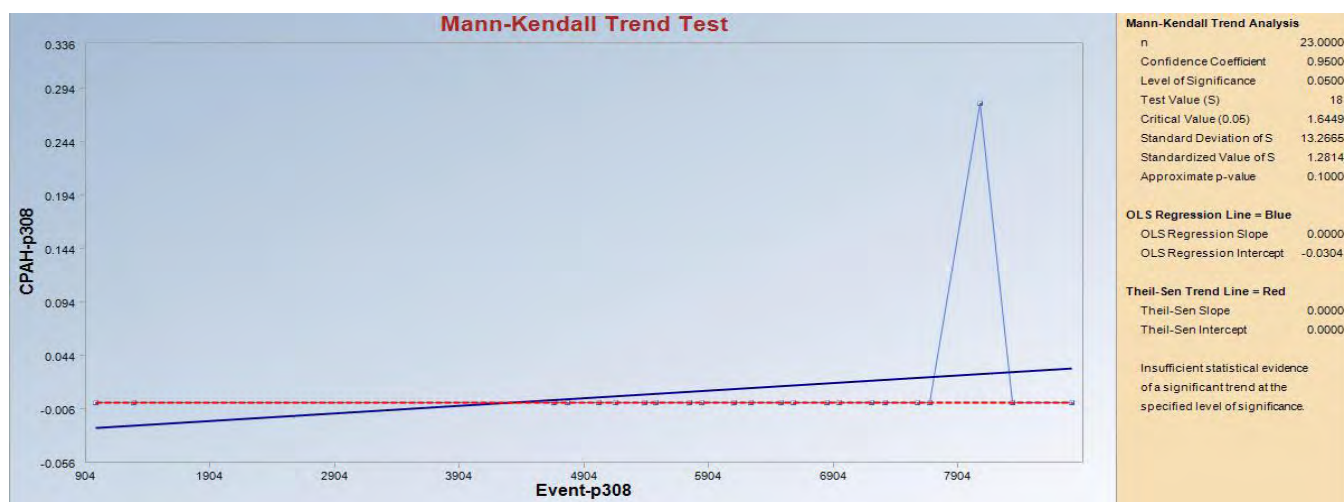
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0.28
Mean	0.0121739
Geometric Mean	0
Median	0
Standard Deviation	0.058384
SEM	0.0121739

Mann-Kendall Test

Test Value (S)	18
Critical Value (0.05)	1.6448536
Standard Deviation of S	13.266499
Standardized Value of S	1.2814232
Approximate p-value	0.1000225

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P308

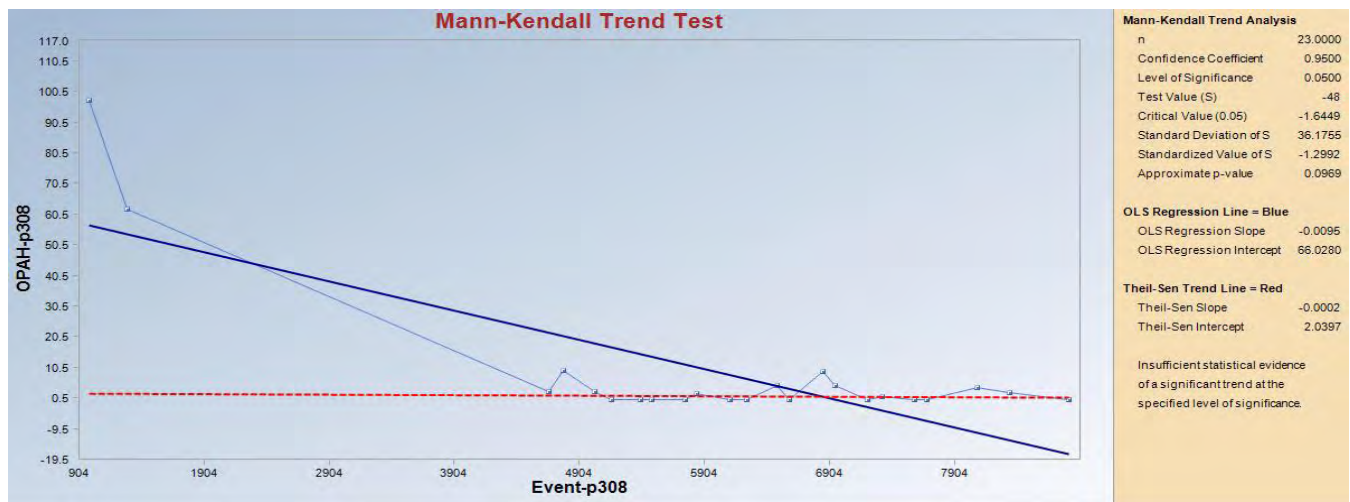
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	97.5
Mean	8.7417391
Geometric Mean	0
Median	0.96
Standard Deviation	23.201715
SEM	4.8378921

Mann-Kendall Test

Test Value (S)	-48
Critical Value (0.05)	-1.644854
Standard Deviation of S	36.175498
Standardized Value of S	-1.299222
Approximate p-value	0.0969339

Insufficient evidence to identify a significant trend at the specified level of significance.



Bap DahA (sum) - P309

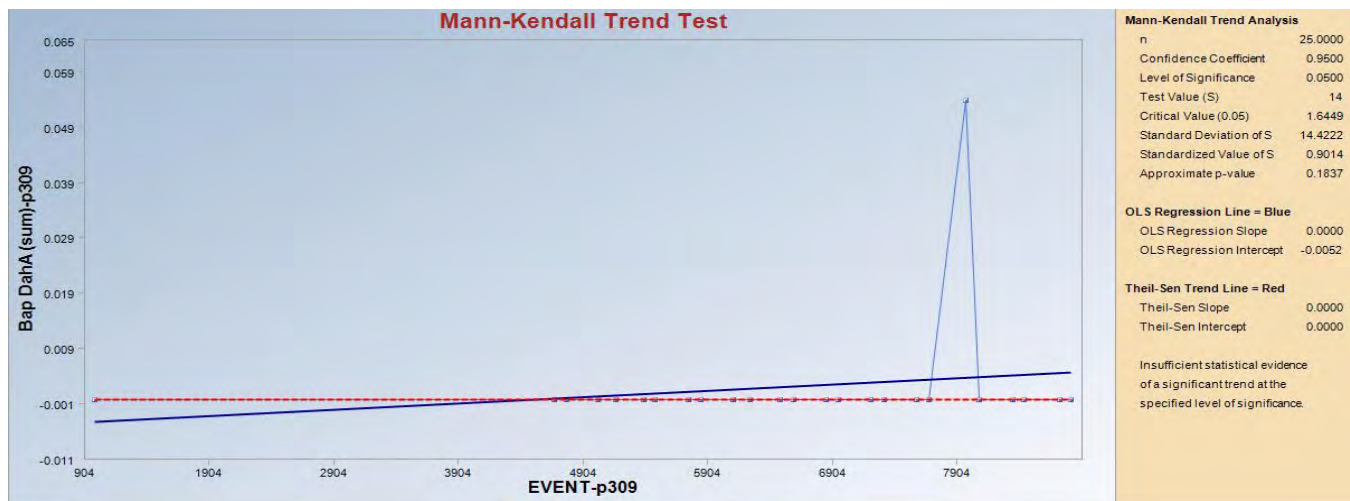
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.054
Mean	0.00216
Geometric Mean	0
Median	0
Standard Deviation	0.0108
SEM	0.00216

Mann-Kendall Test

Test Value (S)	14
Critical Value (0.05)	1.6448536
Standard Deviation of S	14.422205
Standardized Value of S	0.9013878
Approximate p-value	0.1836911

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P309

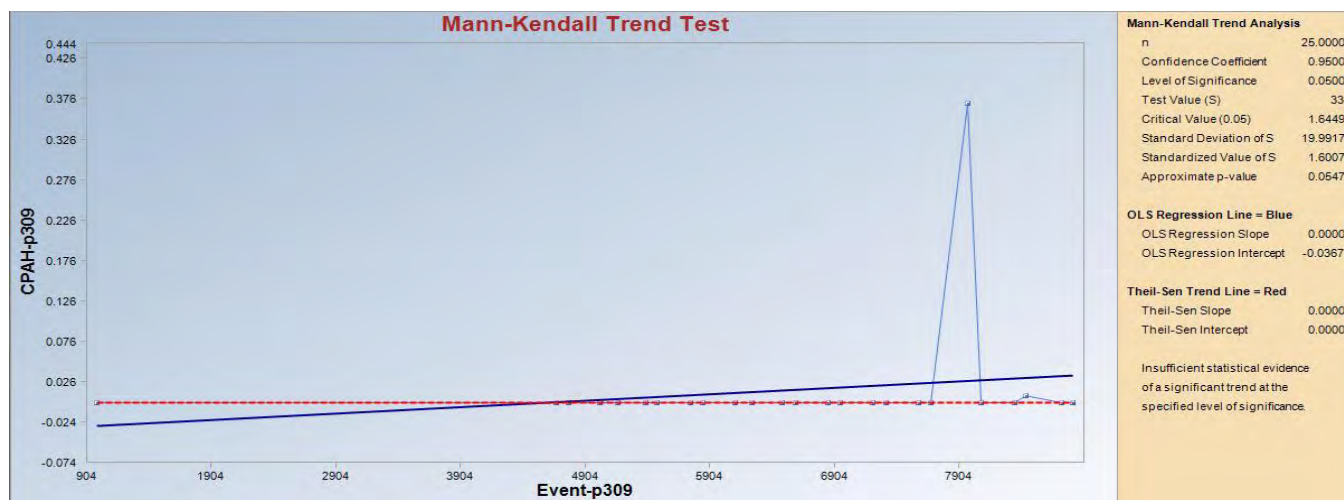
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.37
Mean	0.01514
Geometric Mean	0
Median	0
Standard Deviation	0.0739487
SEM	0.0147897

Mann-Kendall Test

Test Value (S)	33
Critical Value (0.05)	1.6448536
Standard Deviation of S	19.991665
Standardized Value of S	1.6006671
Approximate p-value	0.0547253

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P309

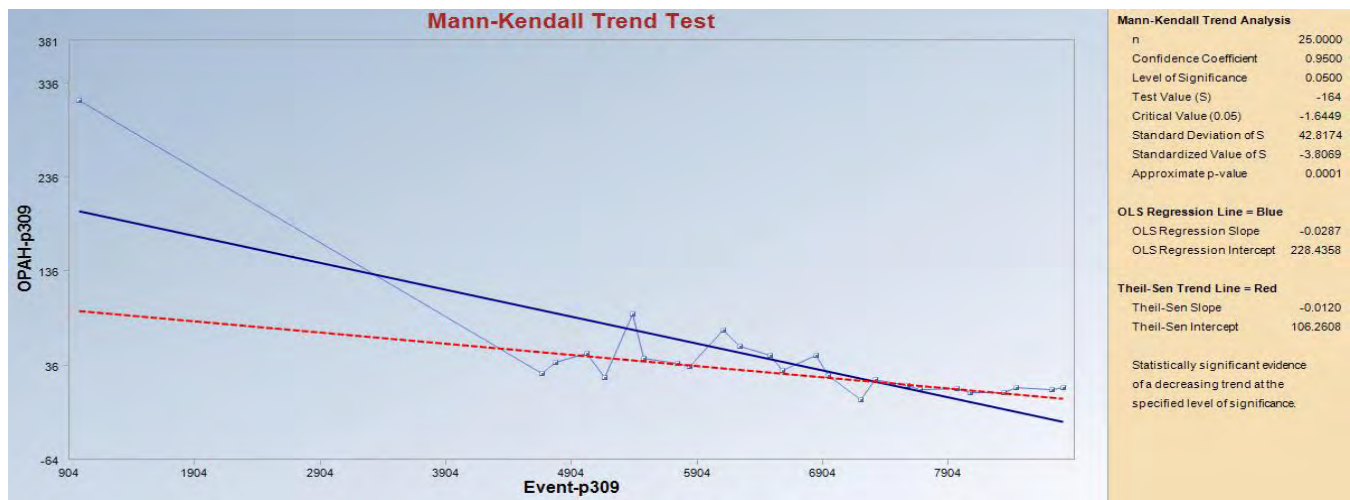
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	317.6
Mean	42.1258
Geometric Mean	0
Median	27.16
Standard Deviation	61.480074
SEM	12.296015

Mann-Kendall Test

Test Value (S)	-164
Critical Value (0.05)	-1.644854
Standard Deviation of S	42.817442
Standardized Value of S	-3.80686
Approximate p-value	7.04E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - P310

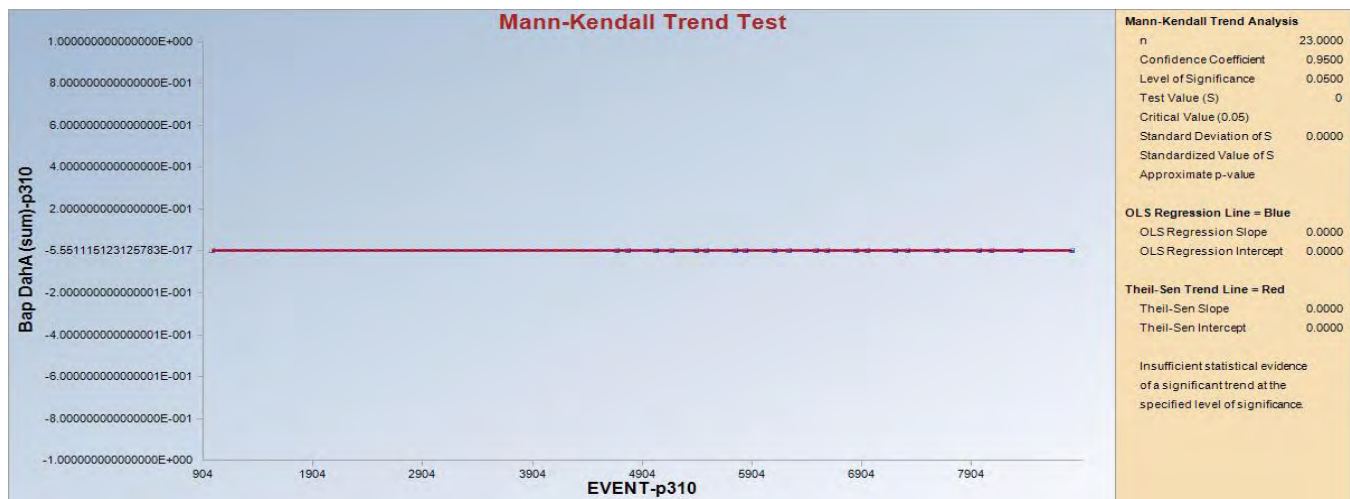
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P310

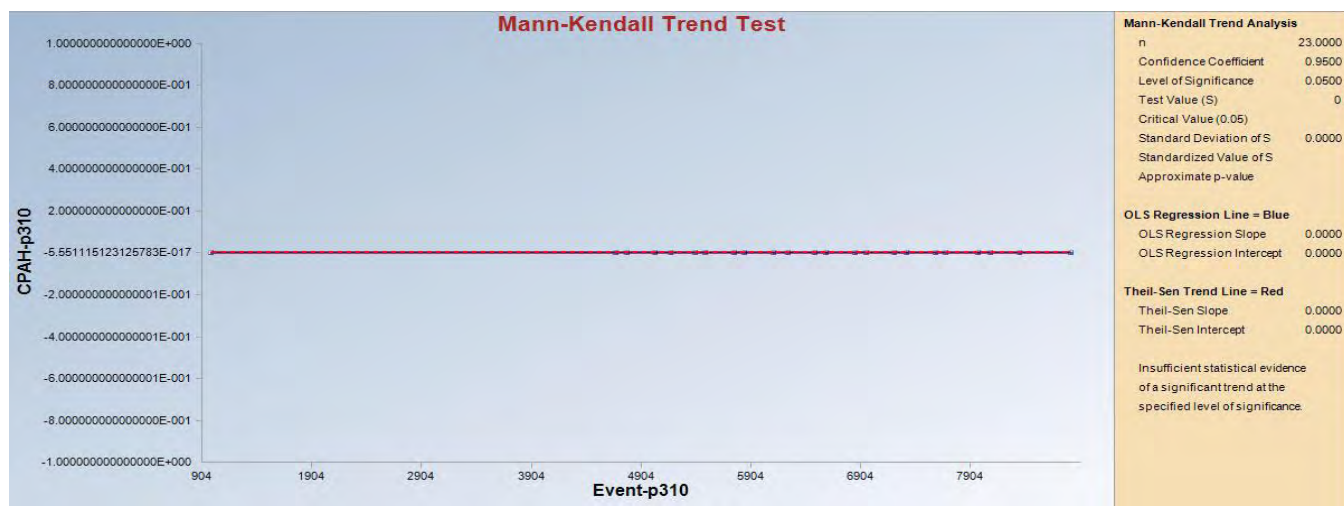
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P310

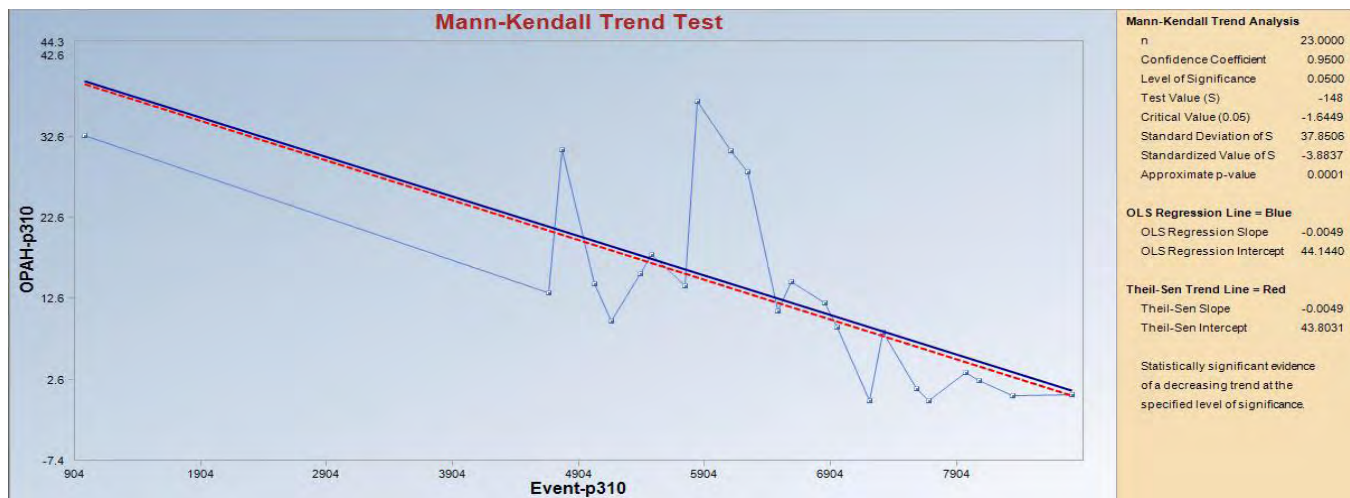
General Statistics

Number of Events	23
Number of Values	23
Minimum	0
Maximum	36.9
Mean	13.415261
Geometric Mean	0
Median	12
Standard Deviation	11.480488
SEM	2.3938472

Mann-Kendall Test

Test Value (S)	-148
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.850583
Standardized Value of S	-3.883692
Approximate p-value	5.14E-05

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - P312

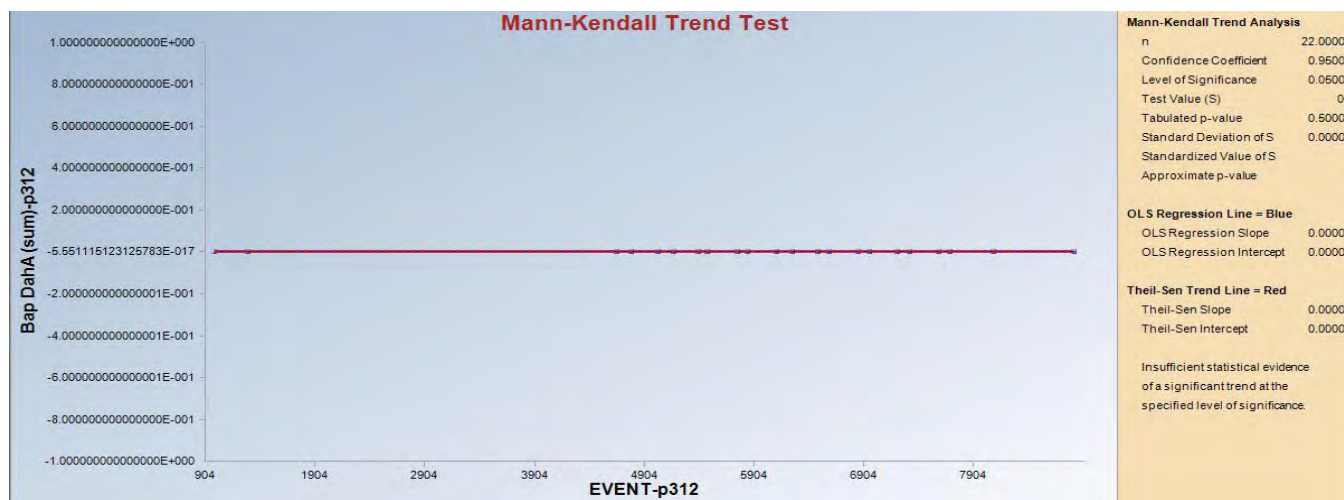
General Statistics

Number of Events	22
Number of Values	22
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.5
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - P312

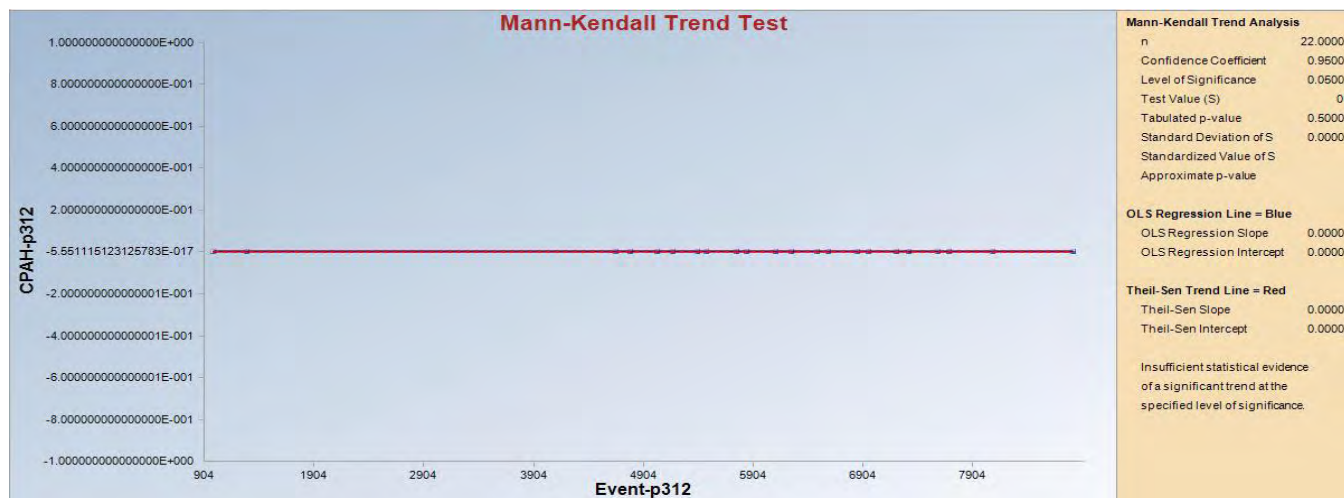
General Statistics

Number of Events	22
Number of Values	22
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.5
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - P312

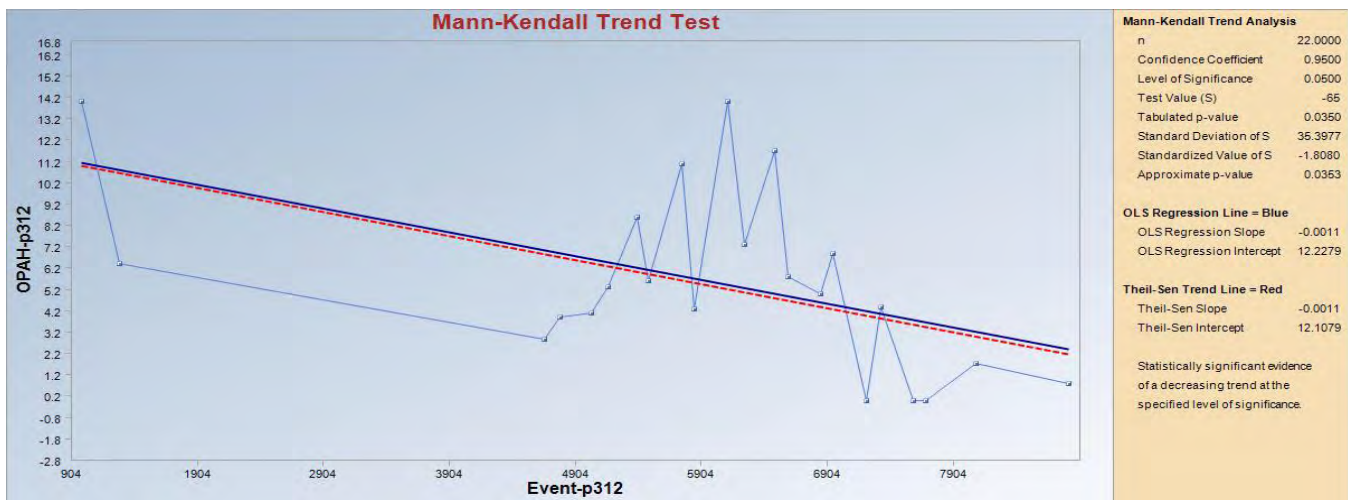
General Statistics

Number of Events	22
Number of Values	22
Minimum	0
Maximum	14
Mean	5.6288727
Geometric Mean	0
Median	5.15
Standard Deviation	4.203934
SEM	0.8962817

Mann-Kendall Test

Test Value (S)	-65
Tabulated p-value	0.035
Standard Deviation of S	35.39774
Standardized Value of S	-1.808025
Approximate p-value	0.0353013

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W10

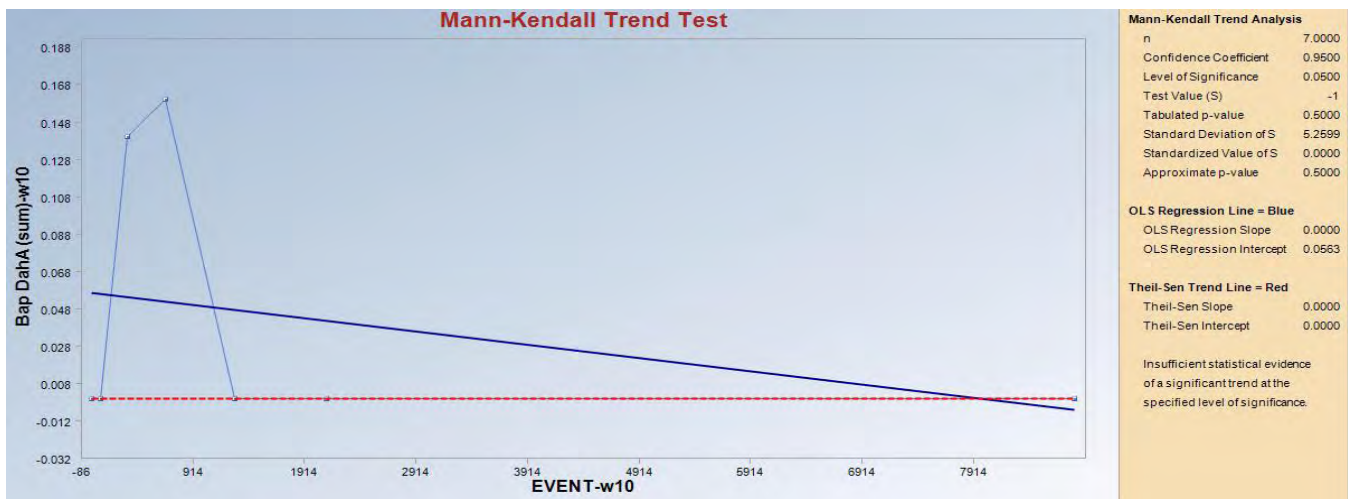
General Statistics

Number of Events	7
Number of Values	7
Minimum	0
Maximum	0.16
Mean	0.0428571
Geometric Mean	0
Median	0
Standard Deviation	0.0734199
SEM	0.0277501

Mann-Kendall Test

Test Value (S)	-1
Tabulated p-value	0.5
Standard Deviation of S	5.2599113
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W10

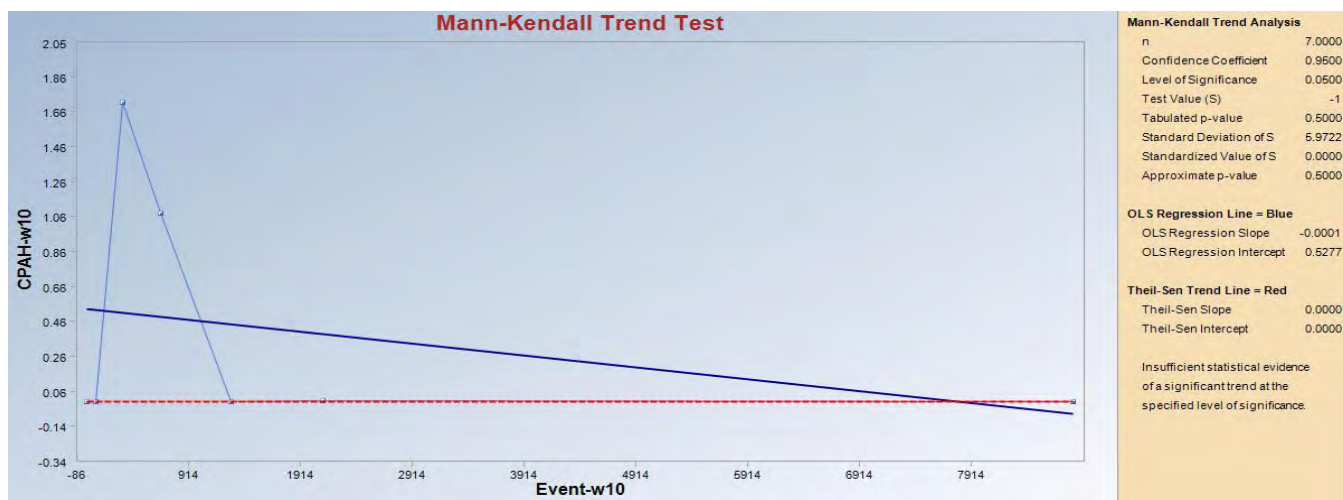
General Statistics

Number of Events	7
Number of Values	7
Minimum	0
Maximum	1.71
Mean	0.3985714
Geometric Mean	0
Median	0
Standard Deviation	0.703802
SEM	0.2660122

Mann-Kendall Test

Test Value (S)	-1
Tabulated p-value	0.5
Standard Deviation of S	5.9721576
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W10

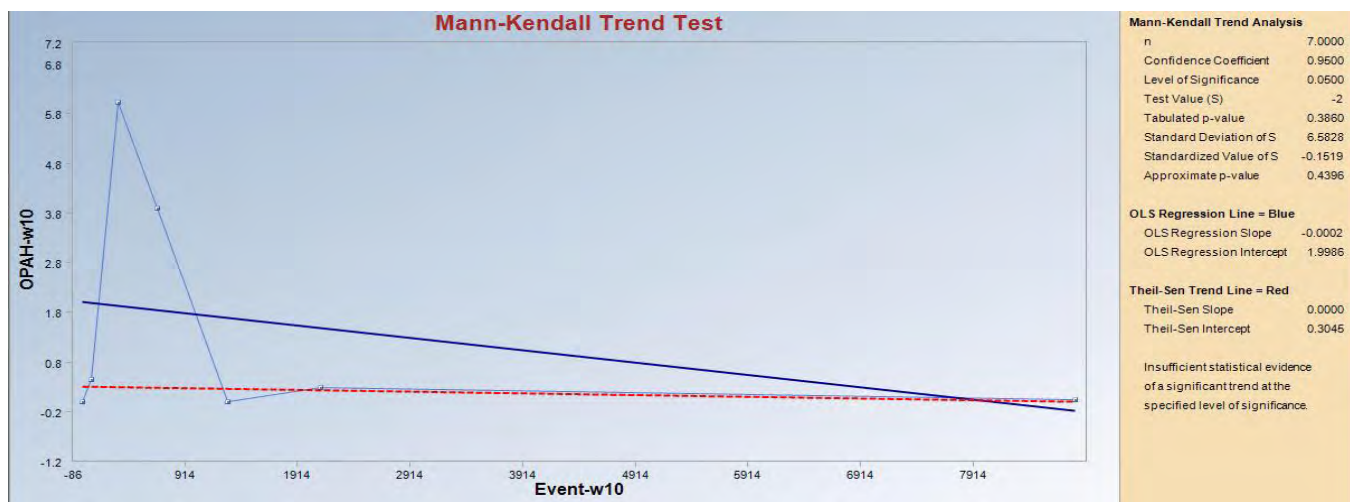
General Statistics

Number of Events	7
Number of Values	7
Minimum	0
Maximum	6.02
Mean	1.5258571
Geometric Mean	0
Median	0.281
Standard Deviation	2.4302804
SEM	0.9185596

Mann-Kendall Test

Test Value (S)	-2
Tabulated p-value	0.386
Standard Deviation of S	6.5828059
Standardized Value of S	-0.151911
Approximate p-value	0.4396286

Insufficient evidence to identify a significant trend at the specified level of significance.



Bap DahA (sum) - W117

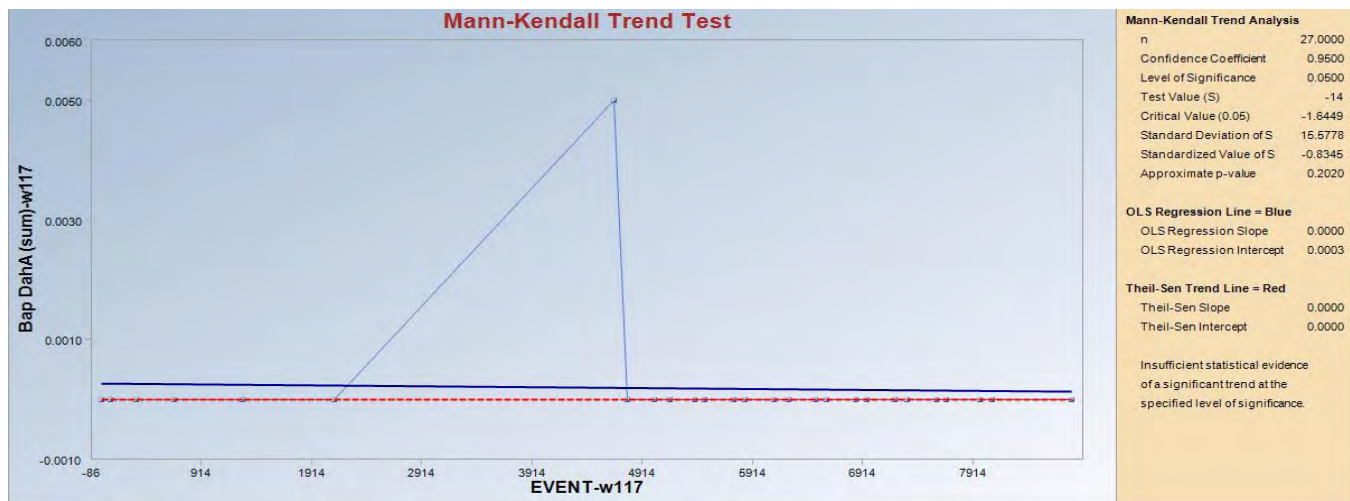
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	0.005
Mean	1.85E-04
Geometric Mean	0
Median	0
Standard Deviation	9.62E-04
SEM	1.85E-04

Mann-Kendall Test

Test Value (S)	-14
Critical Value (0.05)	-1.644854
Standard Deviation of S	15.577762
Standardized Value of S	-0.834523
Approximate p-value	0.2019932

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W117

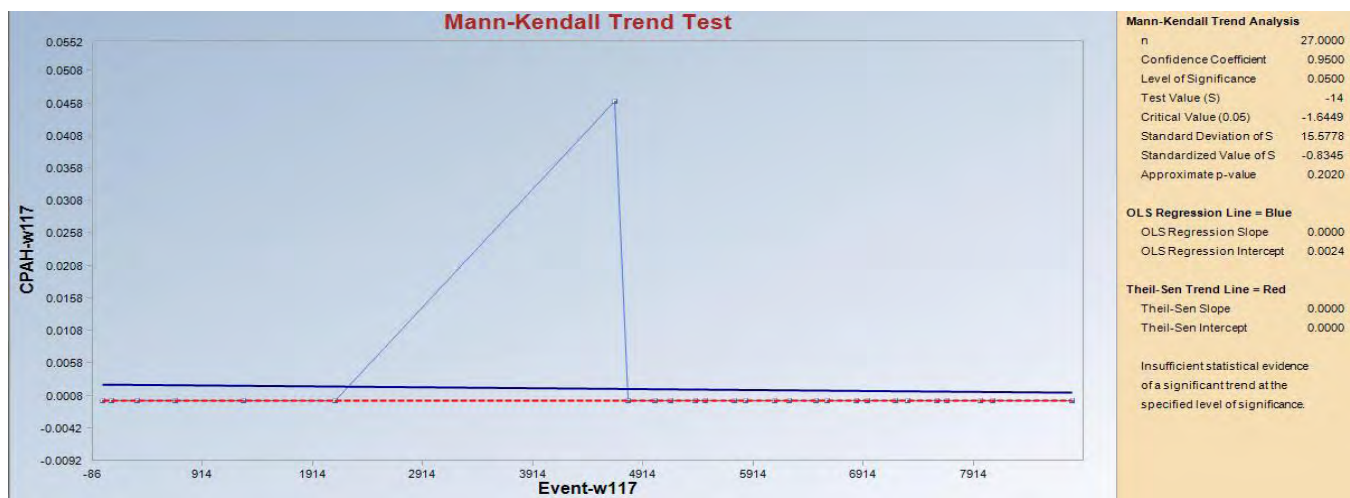
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	0.046
Mean	0.0017037
Geometric Mean	0
Median	0
Standard Deviation	0.0088527
SEM	0.0017037

Mann-Kendall Test

Test Value (S)	-14
Critical Value (0.05)	-1.644854
Standard Deviation of S	15.577762
Standardized Value of S	-0.834523
Approximate p-value	0.2019932

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W117

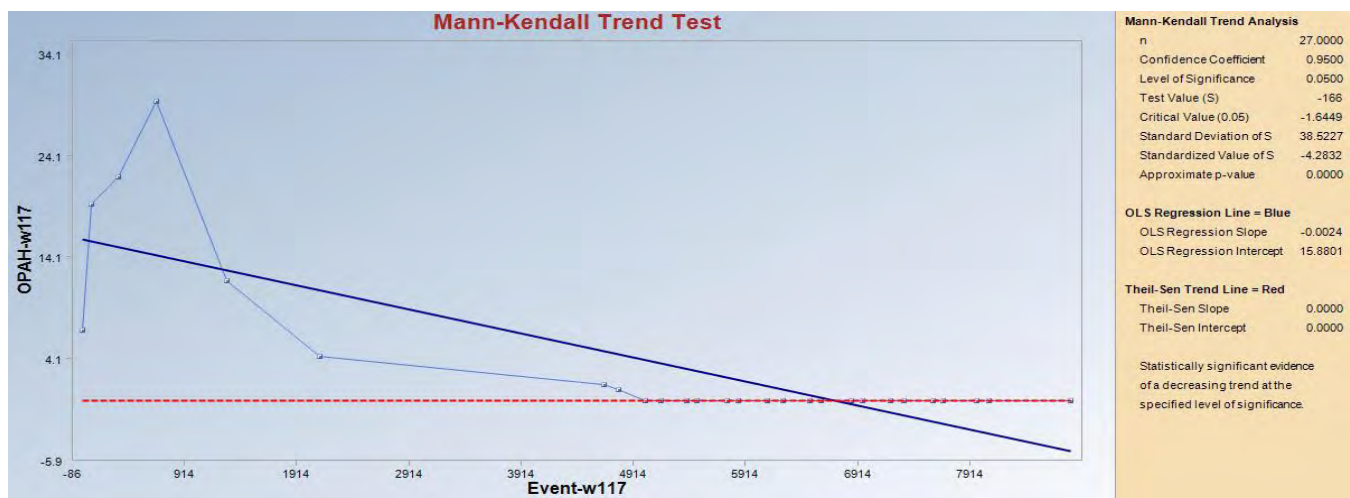
General Statistics

Number of Events	27
Number of Values	27
Minimum	0
Maximum	29.4
Mean	3.5680815
Geometric Mean	0
Median	0
Standard Deviation	7.8127355
SEM	1.5035616

Mann-Kendall Test

Test Value (S)	-166
Critical Value (0.05)	-1.644854
Standard Deviation of S	38.522721
Standardized Value of S	-4.283187
Approximate p-value	9.21E-06

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W128

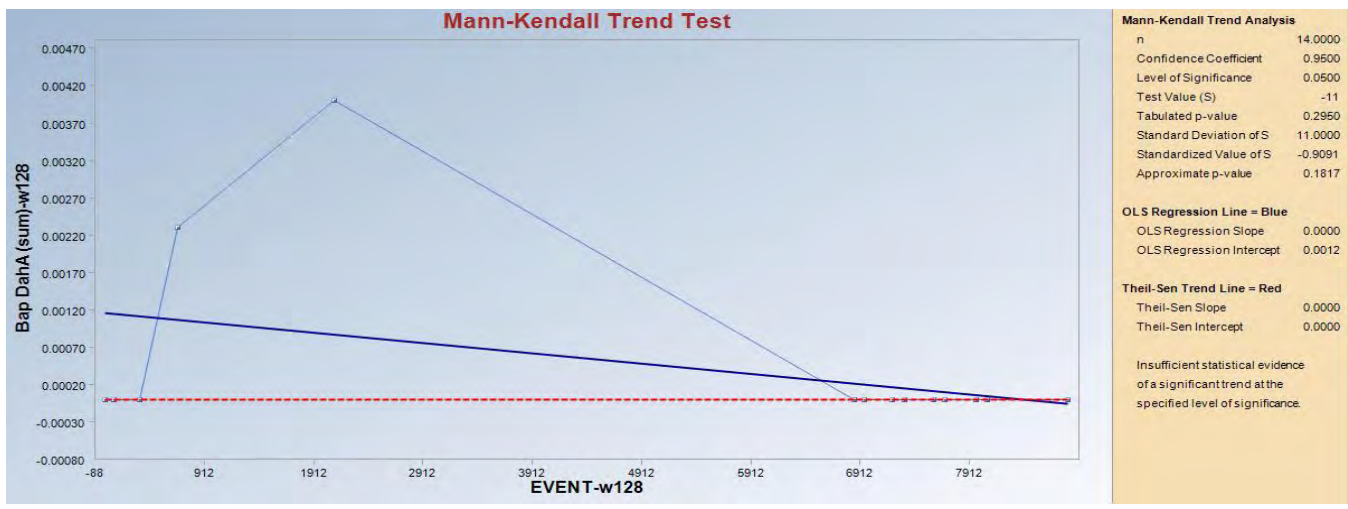
General Statistics

Number of Events	14
Number of Values	14
Minimum	0
Maximum	0.004
Mean	4.50E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0011915
SEM	3.18E-04

Mann-Kendall Test

Test Value (S)	-11
Tabulated p-value	0.295
Standard Deviation of S	11
Standardized Value of S	-0.909091
Approximate p-value	0.1816511

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - w128

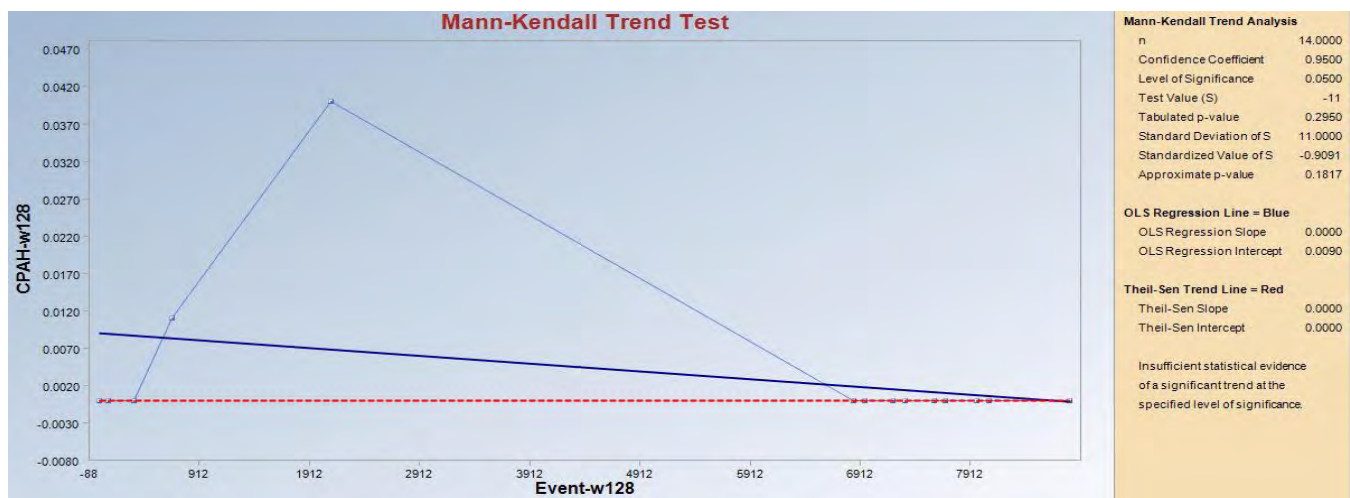
General Statistics

Number of Events	14
Number of Values	14
Minimum	0
Maximum	0.04
Mean	0.0036429
Geometric Mean	0
Median	0
Standard Deviation	0.0108671
SEM	0.0029043

Mann-Kendall Test

Test Value (S)	-11
Tabulated p-value	0.295
Standard Deviation of S	11
Standardized Value of S	-0.909091
Approximate p-value	0.1816511

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W128

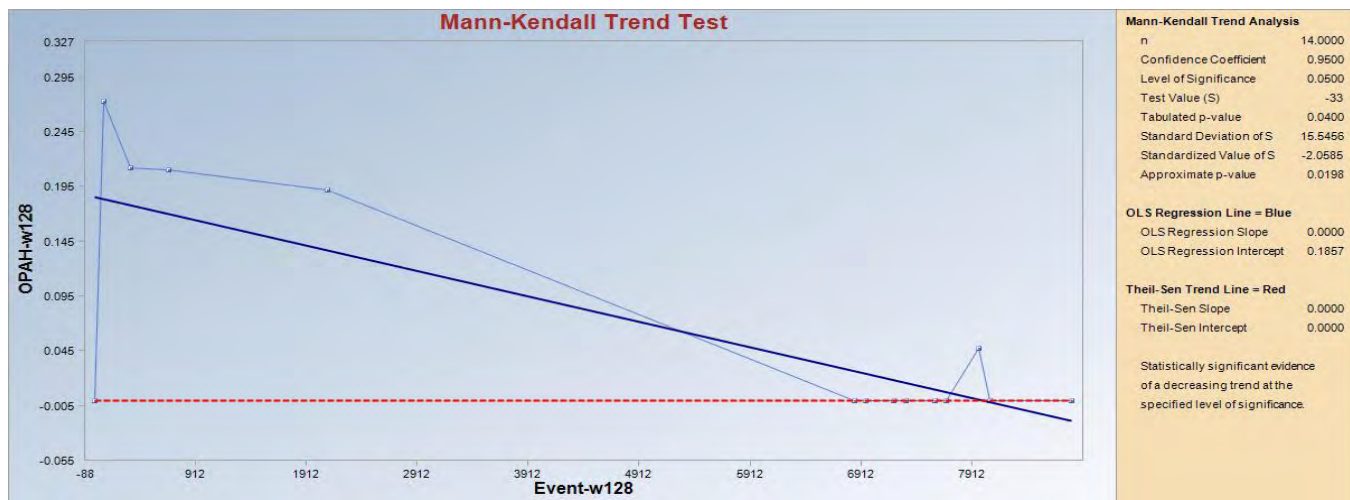
General Statistics

Number of Events	14
Number of Values	14
Minimum	0
Maximum	0.2727
Mean	0.0668286
Geometric Mean	0
Median	0
Standard Deviation	0.1039349
SEM	0.0277778

Mann-Kendall Test

Test Value (S)	-33
Tabulated p-value	0.04
Standard Deviation of S	15.545632
Standardized Value of S	-2.058456
Approximate p-value	0.0197732

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W136

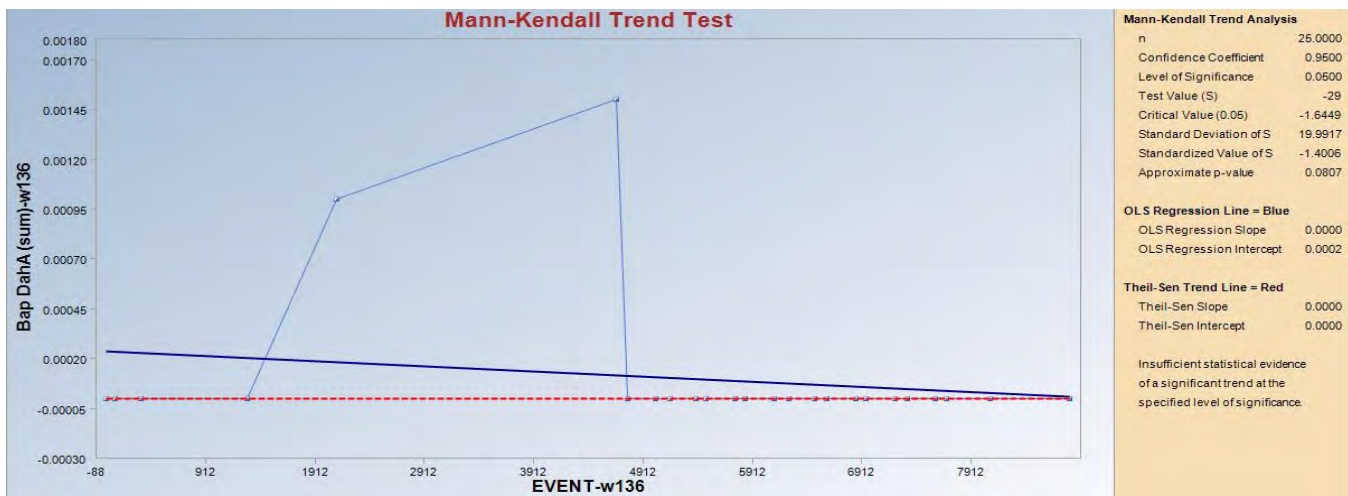
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0015
Mean	1.00E-04
Geometric Mean	0
Median	0
Standard Deviation	3.54E-04
SEM	7.07E-05

Mann-Kendall Test

Test Value (S)	-29
Critical Value (0.05)	-1.644854
Standard Deviation of S	19.991665
Standardized Value of S	-1.400584
Approximate p-value	0.0806693

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W136

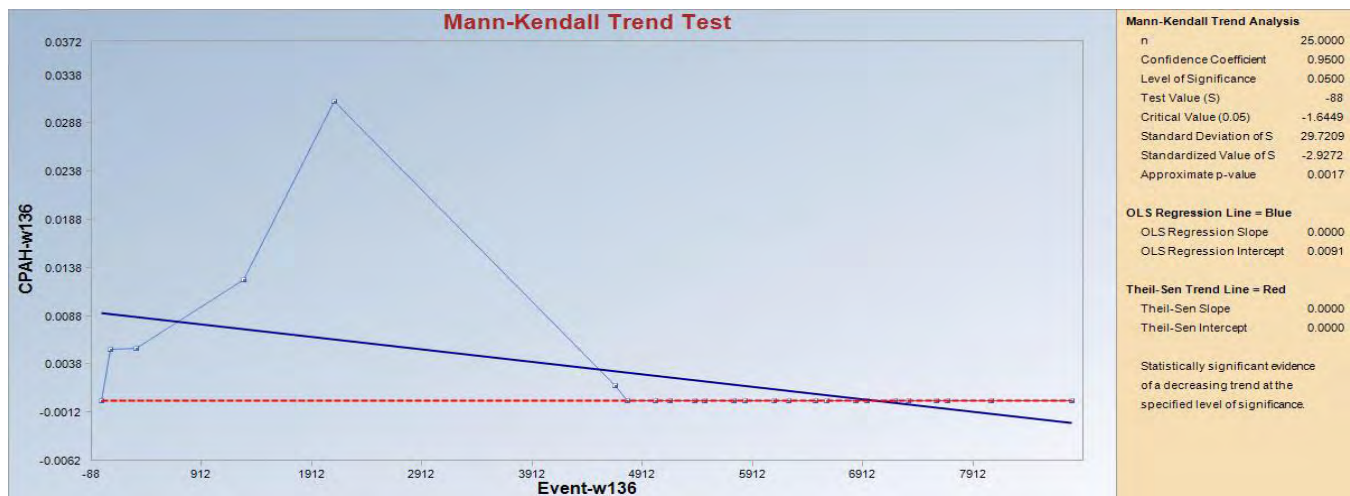
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.031
Mean	0.002228
Geometric Mean	0
Median	0
Standard Deviation	0.0066227
SEM	0.0013245

Mann-Kendall Test

Test Value (S)	-88
Critical Value (0.05)	-1.644854
Standard Deviation of S	29.720924
Standardized Value of S	-2.927231
Approximate p-value	0.00171

Statistically significant evidence of a decreasing trend at the specified level of significance.



OPAH (sum) - W136

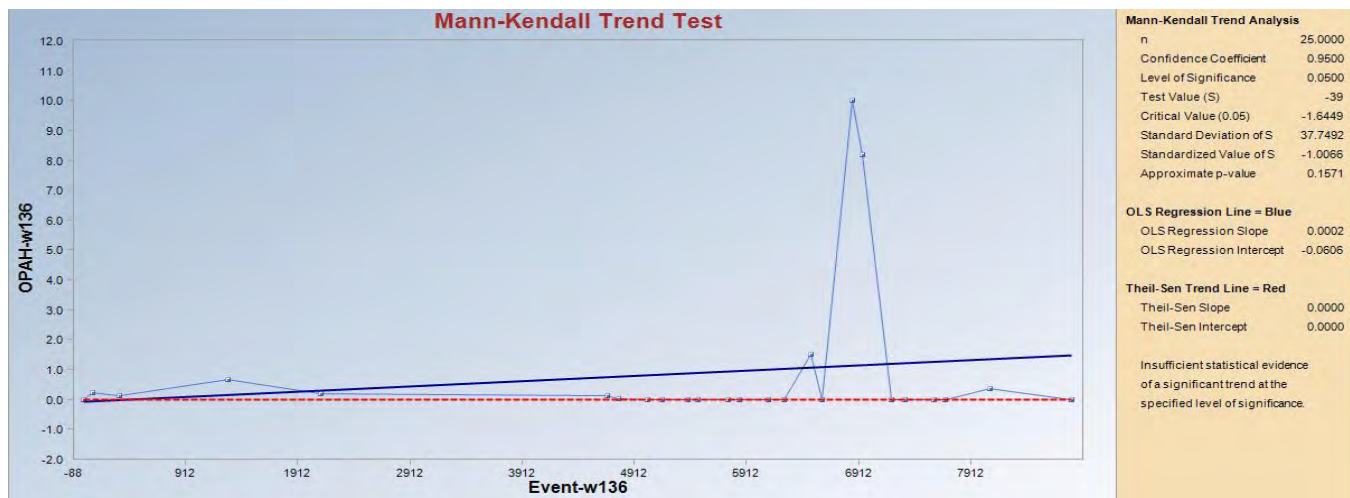
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	10
Mean	0.8578
Geometric Mean	0
Median	0
Standard Deviation	2.5150317
SEM	0.5030063

Mann-Kendall Test

Test Value (S)	-39
Critical Value (0.05)	-1.644854
Standard Deviation of S	37.749172
Standardized Value of S	-1.006645
Approximate p-value	0.1570528

Insufficient evidence to identify a significant trend at the specified level of significance.



Bap DahA (sum) - W15

General Statistics

Number of Events	7
Number of Values	7
Minimum	0
Maximum	0.224
Mean	0.0328571
Geometric Mean	0
Median	0
Standard Deviation	0.0843157
SEM	0.0318684

Mann-Kendall Test

Test Value (S)	-7
Tabulated p-value	0.191
Standard Deviation of S	5.2599113
Standardized Value of S	-1.140704
Approximate p-value	0.1269966

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - W15

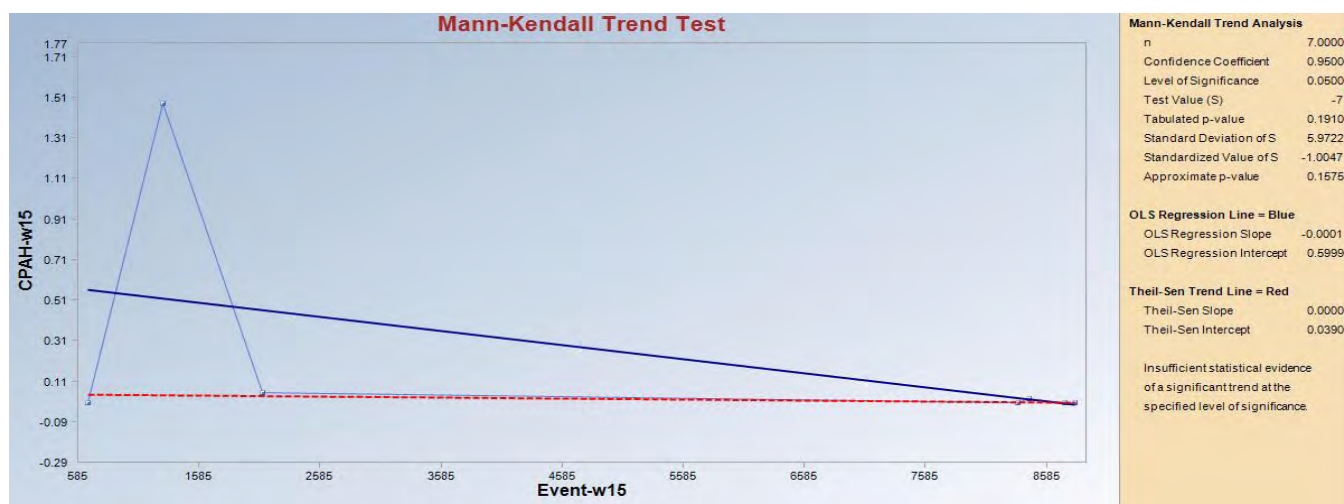
General Statistics

Number of Events	7
Number of Values	7
Minimum	0
Maximum	1.473
Mean	0.2196286
Geometric Mean	0
Median	0
Standard Deviation	0.5529593
SEM	0.208999

Mann-Kendall Test

Test Value (S)	-7
Tabulated p-value	0.191
Standard Deviation of S	5.9721576
Standardized Value of S	-1.004662
Approximate p-value	0.1575298

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W15

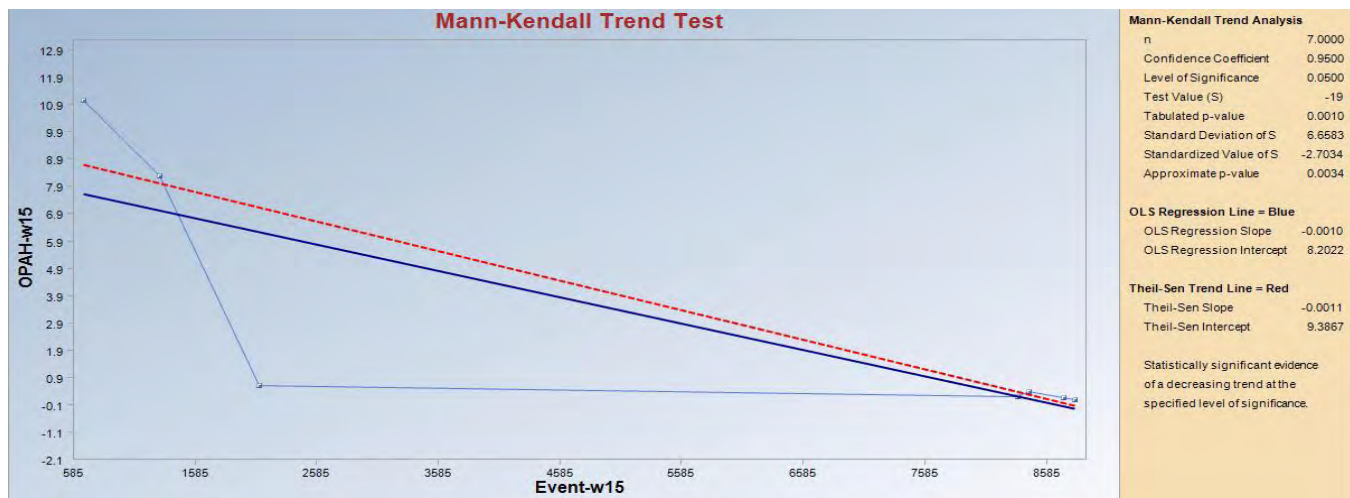
General Statistics

Number of Events	7
Number of Values	7
Minimum	0.044
Maximum	11
Mean	2.9153857
Geometric Mean	0.5351464
Median	0.3237
Standard Deviation	4.6463852
SEM	1.7561685

Mann-Kendall Test

Test Value (S)	-19
Tabulated p-value	0.001
Standard Deviation of S	6.6583281
Standardized Value of S	-2.703381
Approximate p-value	0.0034319

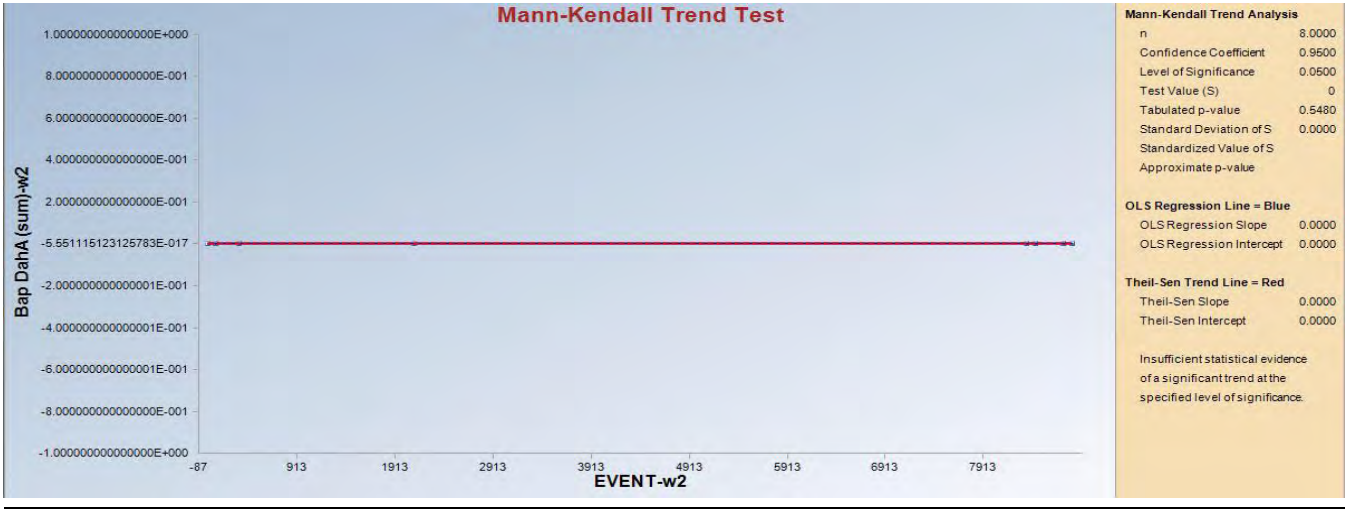
Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W2

General Statistics		
Number of Events		8
Number of Values		8
Minimum		0
Maximum		0
Mean		0
Geometric Mean		0
Median		0
Standard Deviation		0
SEM		0
Mann-Kendall Test		
Test Value (S)		0
Tabulated p-value		0.548
Standard Deviation of S		0
Standardized Value of S	N/A	
Approximate p-value	N/A	

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W2

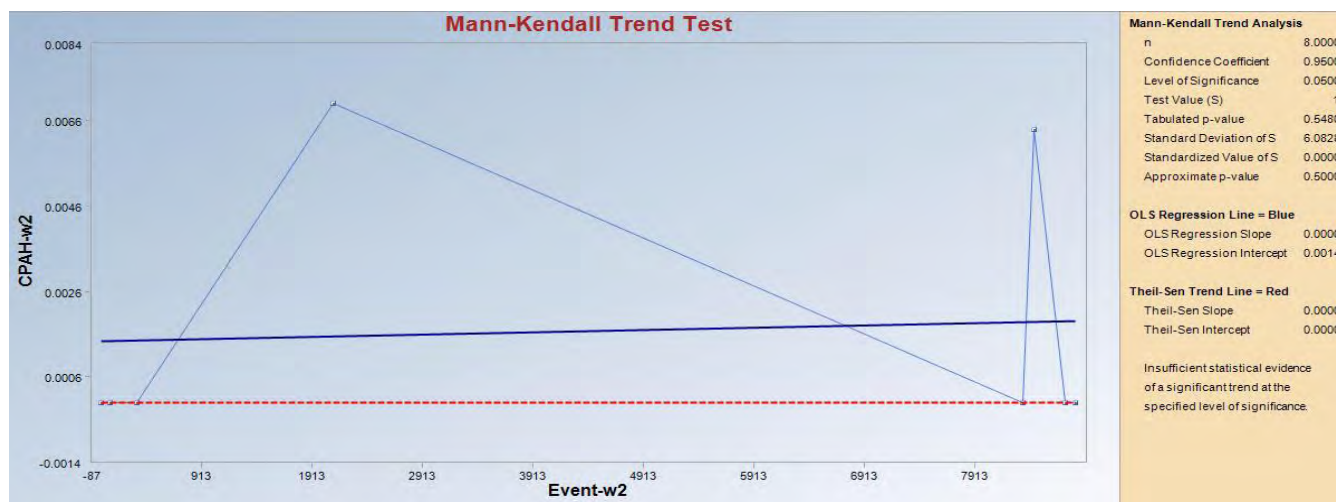
General Statistics

Number of Events	8
Number of Values	8
Minimum	0
Maximum	0.007
Mean	0.001675
Geometric Mean	0
Median	0
Standard Deviation	0.0031056
SEM	0.001098

Mann-Kendall Test

Test Value (S)	1
Tabulated p-value	0.548
Standard Deviation of S	6.0827625
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W2

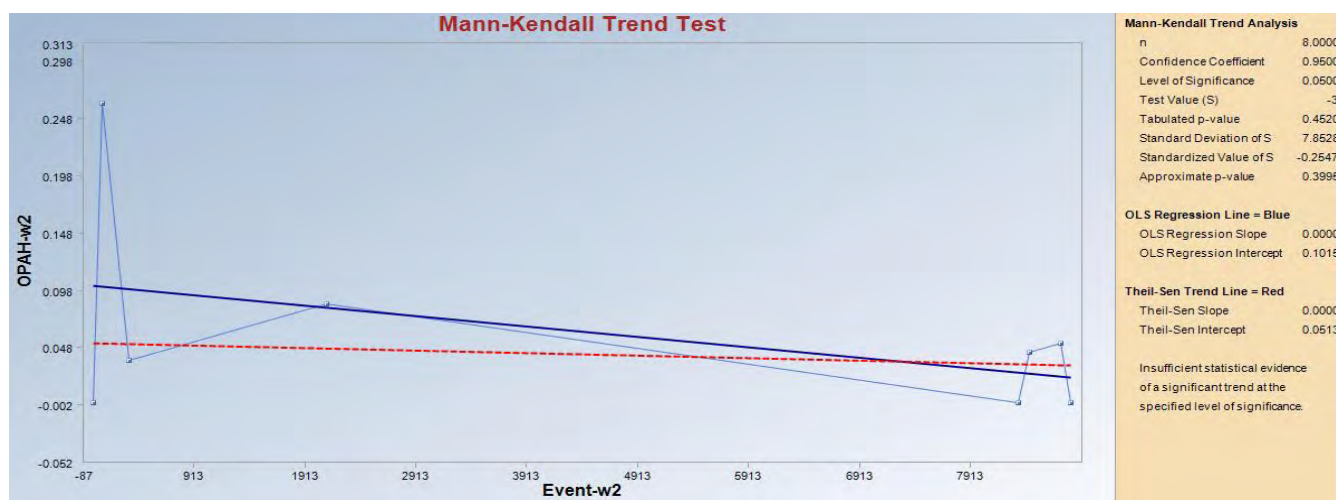
General Statistics

Number of Events	8
Number of Values	8
Minimum	0
Maximum	0.261
Mean	0.0598875
Geometric Mean	0
Median	0.04005
Standard Deviation	0.0868173
SEM	0.0306946

Mann-Kendall Test

Test Value (S)	-3
Tabulated p-value	0.452
Standard Deviation of S	7.8528127
Standardized Value of S	-0.254686
Approximate p-value	0.3994829

Insufficient evidence to identify a significant trend at the specified level of significance.



Bap DahA (sum) - W420

General Statistics

Number of Events	99
Number of Values	99
Minimum	0
Maximum	0.049
Mean	4.95E-04
Geometric Mean	0
Median	0
Standard Deviation	0.0049247
SEM	4.95E-04

Mann-Kendall Test

Test Value (S)	96
Critical Value (0.05)	1.6448536
Standard Deviation of S	57.154761
Standardized Value of S	1.6621538
Approximate p-value	0.048241

Statistically significant evidence of an increasing trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

CPAH (sum) - W420

General Statistics

Number of Events	99
Number of Values	99
Minimum	0
Maximum	88
Mean	0.8901414
Geometric Mean	0
Median	0
Standard Deviation	8.8442126
SEM	0.8888768

Mann-Kendall Test

Test Value (S)	111
Critical Value (0.05)	1.6448536
Standard Deviation of S	97.998299
Standardized Value of S	1.1224685
Approximate p-value	0.1308317

Insufficient evidence to identify a significant trend at the specified level of significance.

Output graph not provided by ProUCL 4.1

OPAH (sum) - W420

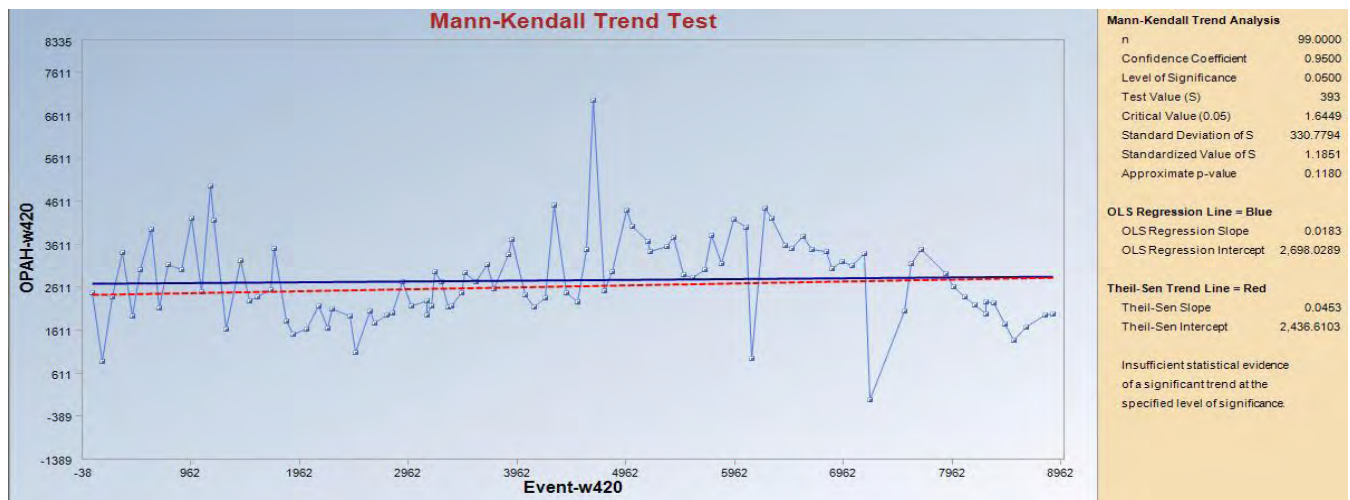
General Statistics

Number of Events	99
Number of Values	99
Minimum	0
Maximum	6946.2
Mean	2776.7945
Geometric Mean	0
Median	2623.22
Standard Deviation	992.57456
SEM	99.757497

Mann-Kendall Test

Test Value (S)	393
Critical Value (0.05)	1.6448536
Standard Deviation of S	330.77938
Standardized Value of S	1.1850799
Approximate p-value	0.1179929

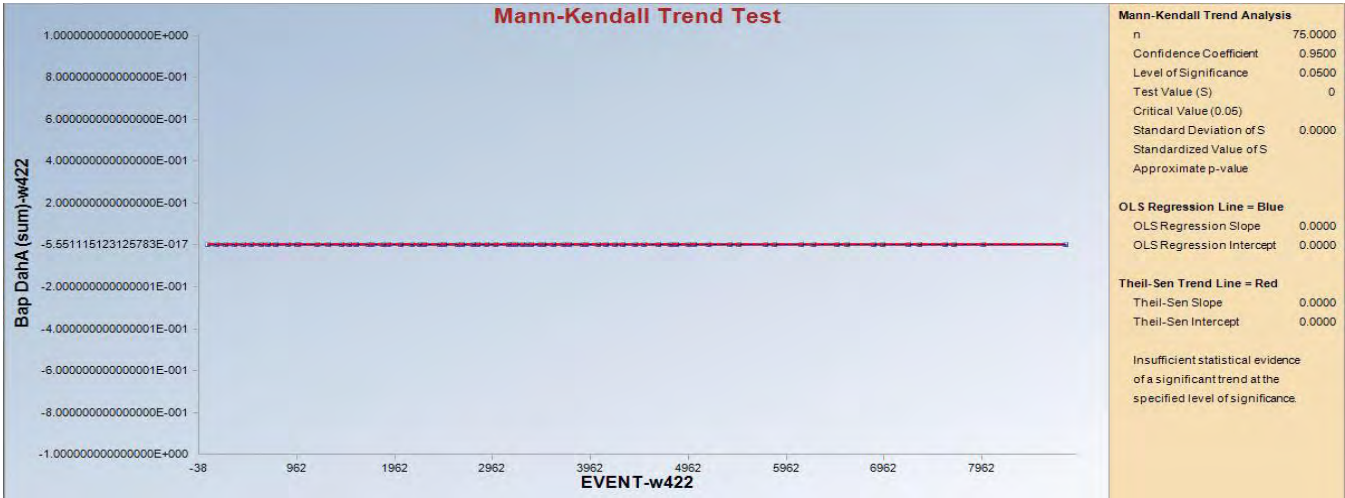
Insufficient evidence to identify a significant trend at the specified level of significance.



Bap DahA (sum) - W422

General Statistics		
Number of Events		75
Number of Values		75
Minimum		0
Maximum		0
Mean		0
Geometric Mean		0
Median		0
Standard Deviation		0
SEM		0
Mann-Kendall Test		
Test Value (S)		0
Critical Value (0.05)	N/A	
Standard Deviation of S		0
Standardized Value of S	N/A	
Approximate p-value	N/A	

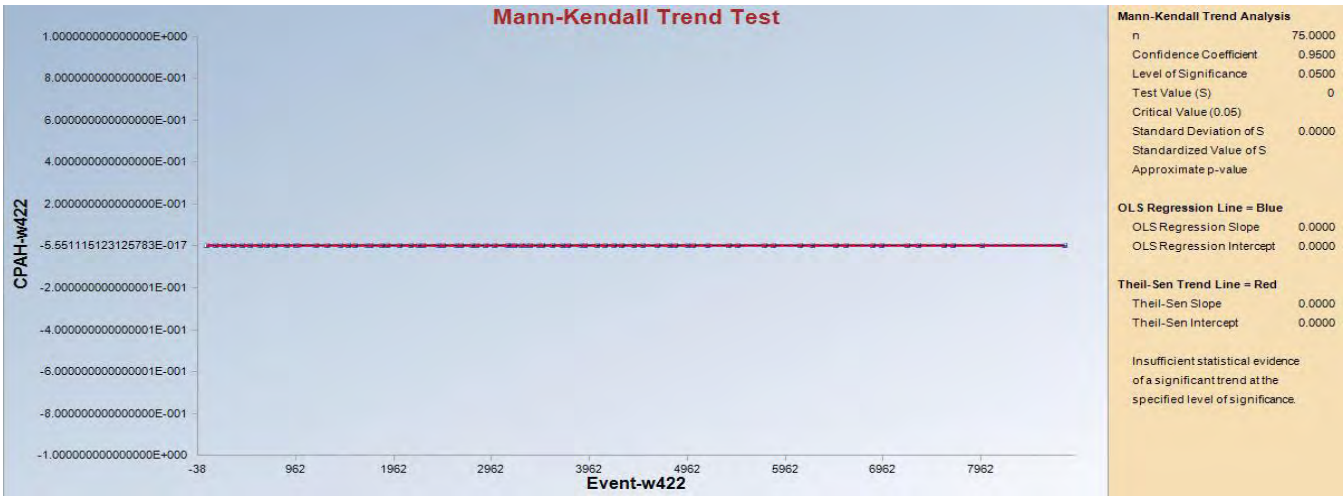
Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W422

General Statistics		
Number of Events		75
Number of Values		75
Minimum		0
Maximum		0
Mean		0
Geometric Mean		0
Median		0
Standard Deviation		0
SEM		0
Mann-Kendall Test		
Test Value (S)		0
Critical Value (0.05)	N/A	
Standard Deviation of S		0
Standardized Value of S	N/A	
Approximate p-value	N/A	

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W422

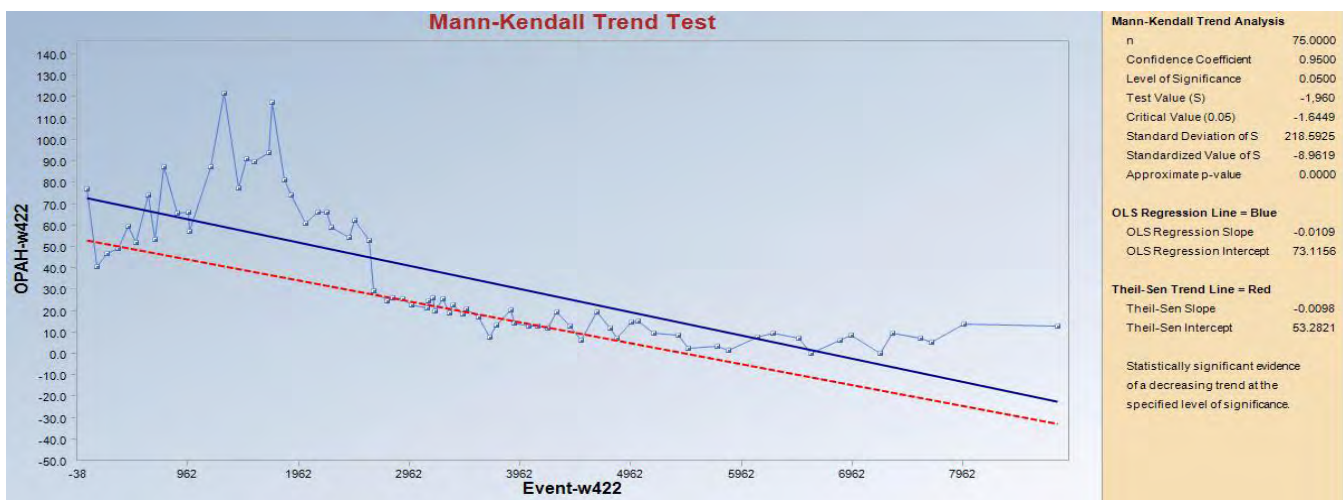
General Statistics

Number of Events	75
Number of Values	75
Minimum	0
Maximum	121.4
Mean	35.099935
Geometric Mean	0
Median	21.3
Standard Deviation	30.830539
SEM	3.560004

Mann-Kendall Test

Test Value (S)	-1960
Critical Value (0.05)	-1.644854
Standard Deviation of S	218.59247
Standardized Value of S	-8.961882
Approximate p-value	1.60E-19

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W427

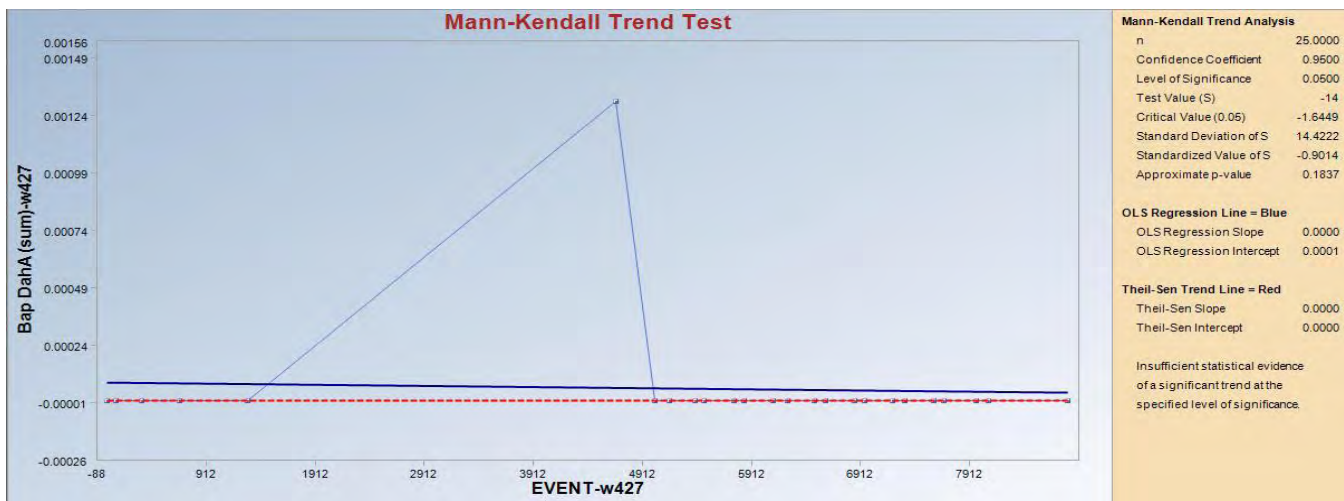
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.0013
Mean	5.20E-05
Geometric Mean	0
Median	0
Standard Deviation	2.60E-04
SEM	5.20E-05

Mann-Kendall Test

Test Value (S)	-14
Critical Value (0.05)	-1.644854
Standard Deviation of S	14.422205
Standardized Value of S	-0.901388
Approximate p-value	0.1836911

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W427

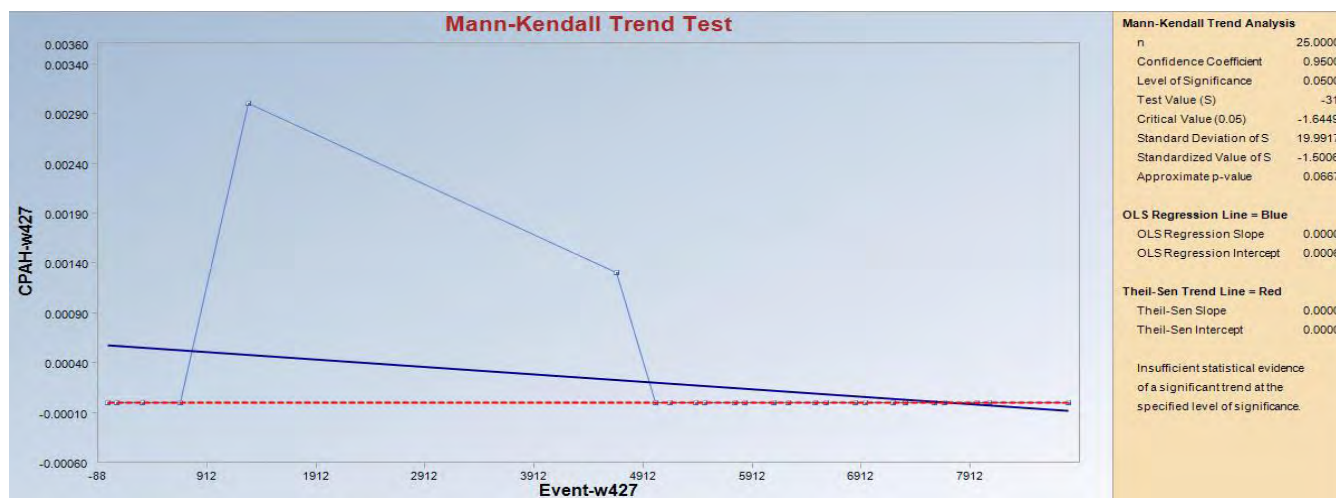
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.003
Mean	1.72E-04
Geometric Mean	0
Median	0
Standard Deviation	6.44E-04
SEM	1.29E-04

Mann-Kendall Test

Test Value (S)	-31
Critical Value (0.05)	-1.644854
Standard Deviation of S	19.991665
Standardized Value of S	-1.500625
Approximate p-value	0.0667262

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W427

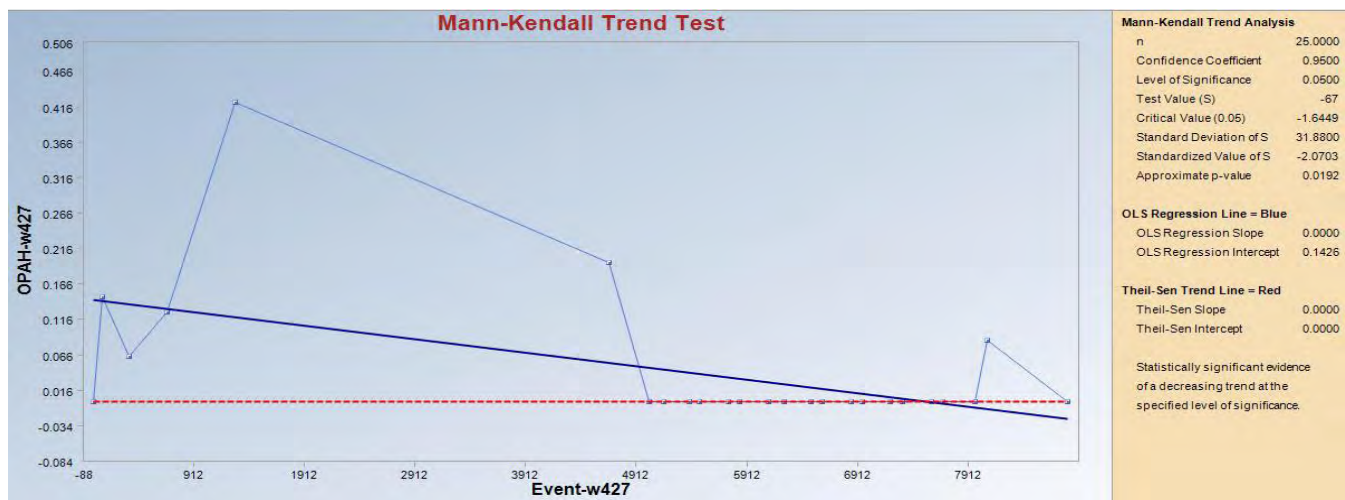
General Statistics

Number of Events	25
Number of Values	25
Minimum	0
Maximum	0.4218
Mean	0.04166
Geometric Mean	0
Median	0
Standard Deviation	0.0962068
SEM	0.0192414

Mann-Kendall Test

Test Value (S)	-67
Critical Value (0.05)	-1.644854
Standard Deviation of S	31.879983
Standardized Value of S	-2.070265
Approximate p-value	0.0192138

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W439

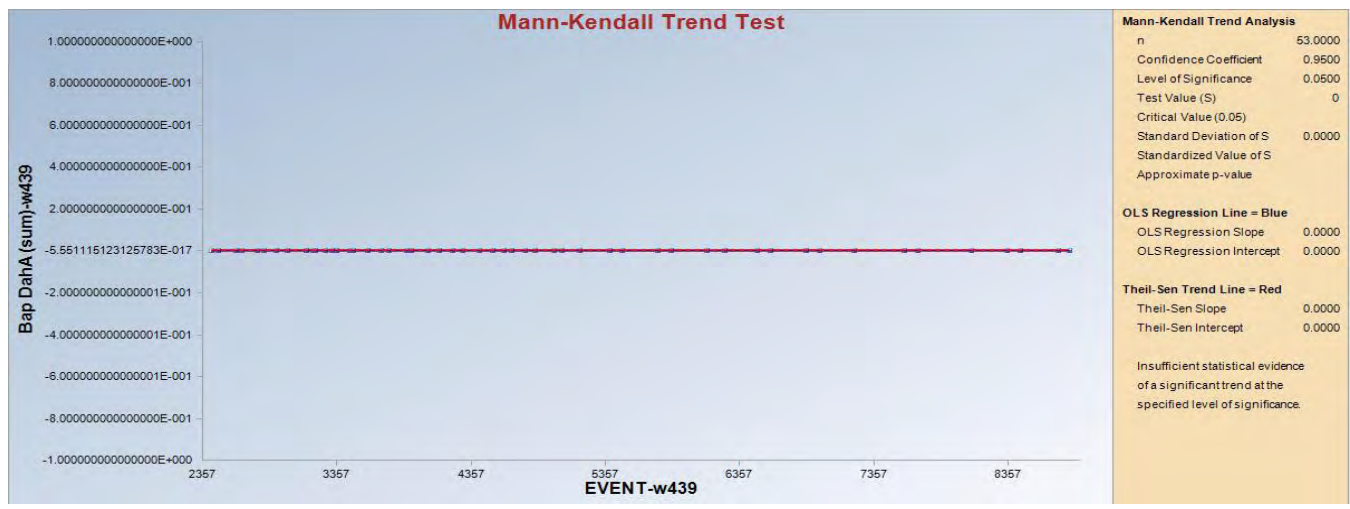
General Statistics

Number of Events	53
Number of Values	53
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Critical Value (0.05)	N/A
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W439

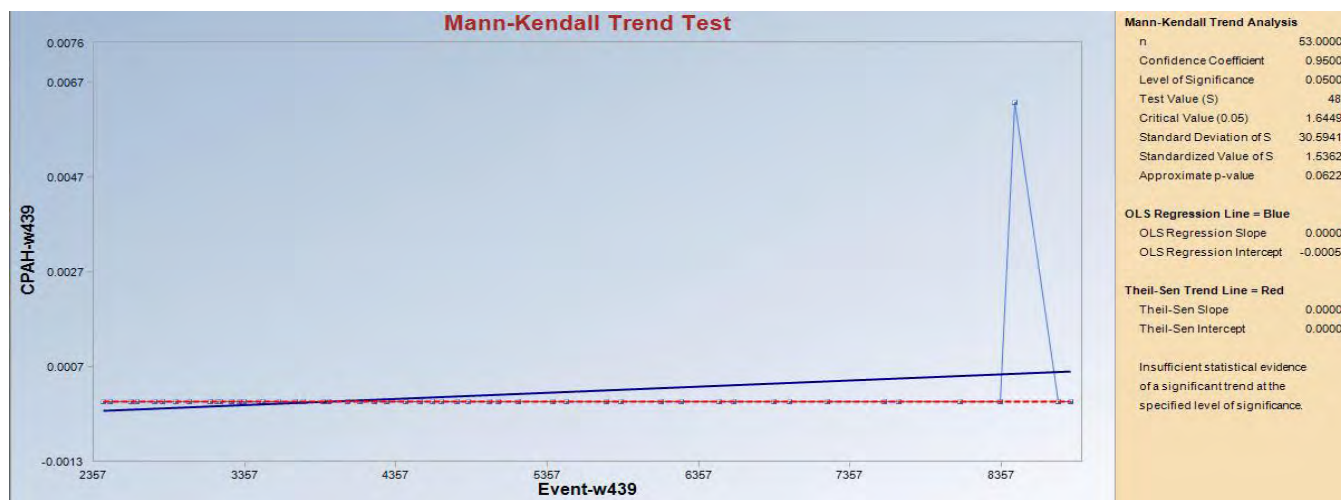
General Statistics

Number of Events	53
Number of Values	53
Minimum	0
Maximum	0.0063
Mean	1.19E-04
Geometric Mean	0
Median	0
Standard Deviation	8.65E-04
SEM	1.19E-04

Mann-Kendall Test

Test Value (S)	48
Critical Value (0.05)	1.6448536
Standard Deviation of S	30.594117
Standardized Value of S	1.5362431
Approximate p-value	0.0622394

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W439

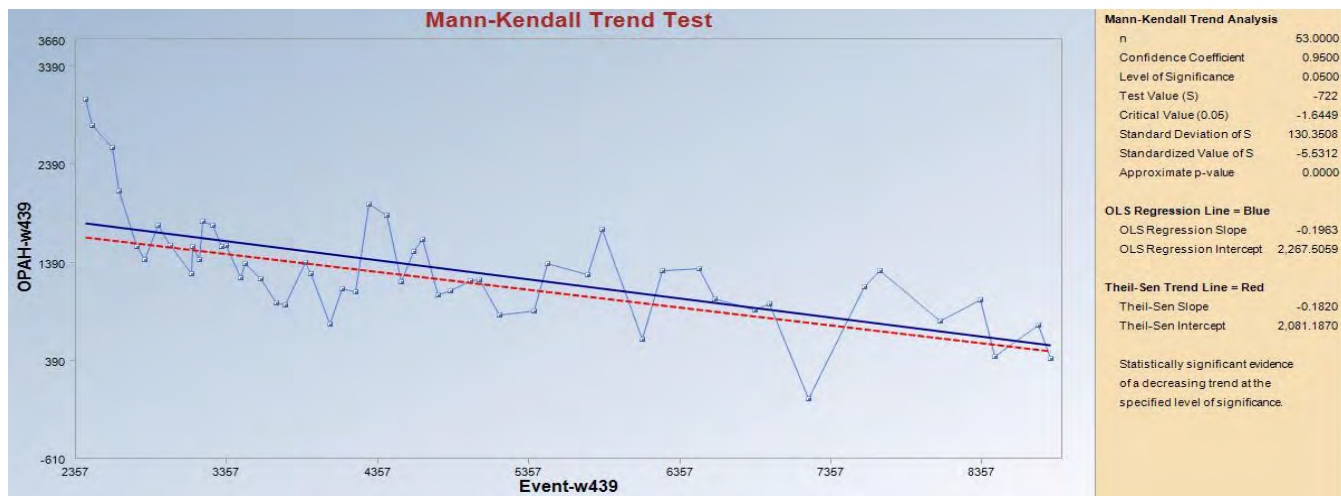
General Statistics

Number of Events	53
Number of Values	53
Minimum	0
Maximum	3050.4
Mean	1319.0836
Geometric Mean	0
Median	1277
Standard Deviation	547.37482
SEM	75.187714

Mann-Kendall Test

Test Value (S)	-722
Critical Value (0.05)	-1.644854
Standard Deviation of S	130.35081
Standardized Value of S	-5.531228
Approximate p-value	1.59E-08

Statistically significant evidence of a decreasing trend at the specified level of significance.



Bap DahA (sum) - W9

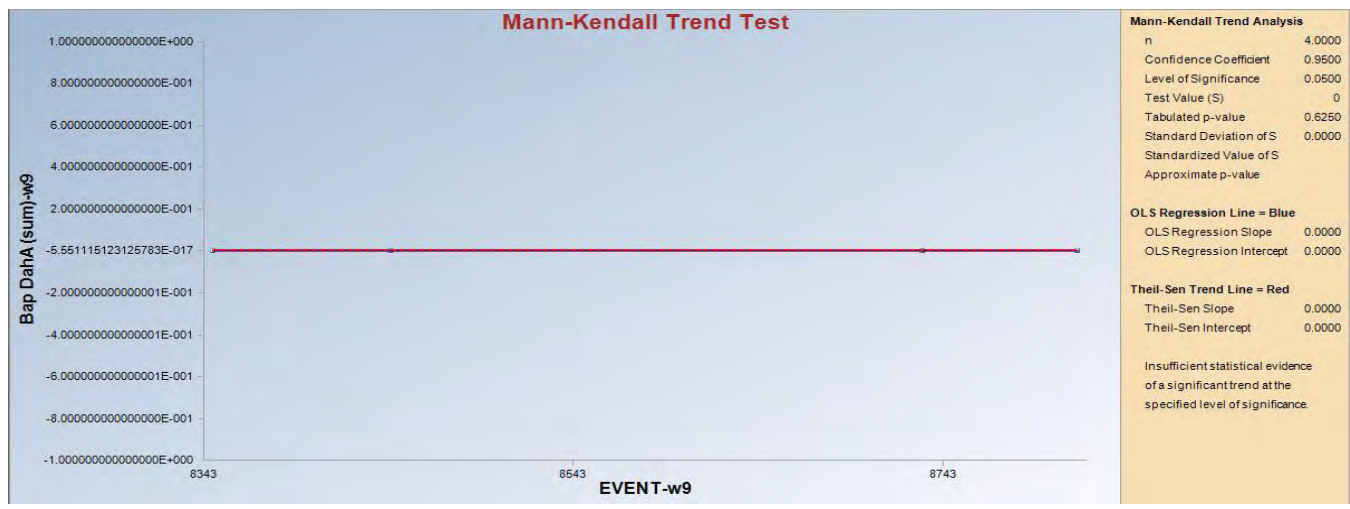
General Statistics

Number of Events	4
Number of Values	4
Minimum	0
Maximum	0
Mean	0
Geometric Mean	0
Median	0
Standard Deviation	0
SEM	0

Mann-Kendall Test

Test Value (S)	0
Tabulated p-value	0.625
Standard Deviation of S	0
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.



CPAH (sum) - W9

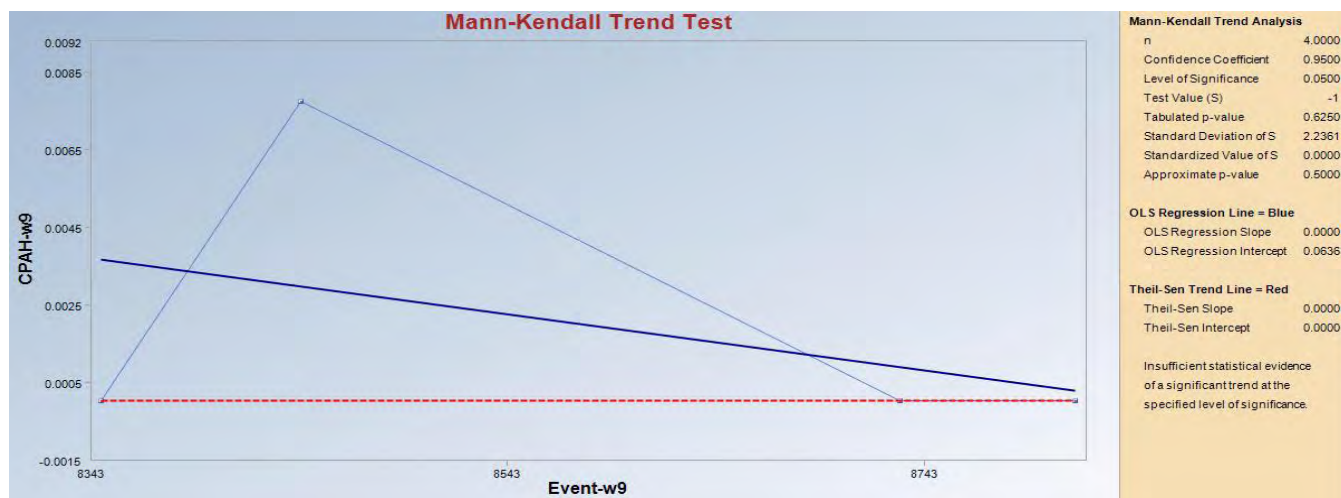
General Statistics

Number of Events	4
Number of Values	4
Minimum	0
Maximum	0.0077
Mean	0.001925
Geometric Mean	0
Median	0
Standard Deviation	0.00385
SEM	0.001925

Mann-Kendall Test

Test Value (S)	-1
Tabulated p-value	0.625
Standard Deviation of S	2.236068
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.



OPAH (sum) - W9

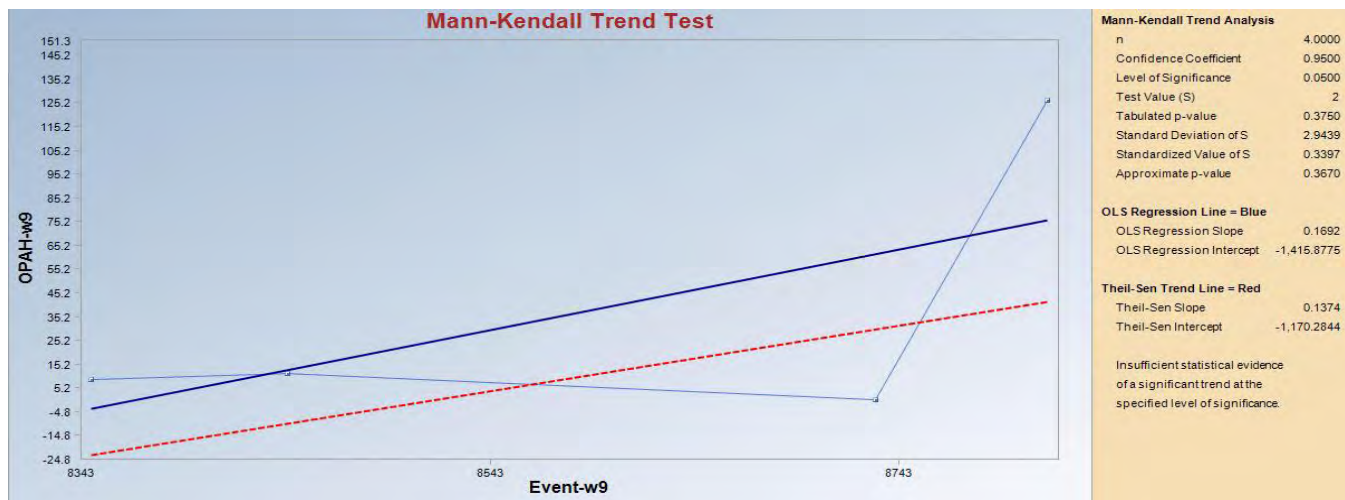
General Statistics

Number of Events	4
Number of Values	4
Minimum	0.38
Maximum	126.16
Mean	36.607
Geometric Mean	8.2695552
Median	9.944
Standard Deviation	59.879419
SEM	29.93971

Mann-Kendall Test

Test Value (S)	2
Tabulated p-value	0.375
Standard Deviation of S	2.9439203
Standardized Value of S	0.3396831
Approximate p-value	0.3670476

Insufficient evidence to identify a significant trend at the specified level of significance.



Appendix B Well W403 Investigation

Well W403 Investigation

During low-flow sampling in 2012 an obstruction was encountered in well W403 at a depth of approximately 240 feet. The attached W403 well log shows the Prairie du Chien formation from a depth of 230 feet to 382 feet, the casing ends at a depth of 235 feet, and the well is open hole to the bottom at 385 feet deep. On October 4, 2012 this well was inspected with a down-hole television camera and was shown to contain debris including branches, wood, grass, and soil. The City hired Keys Well Drilling Company (MN license 1347) to remove the debris and clean this well. Keys' work record and photographs of the material removed from the well is attached. After cleaning in late December 2012 the well was pumped at approximately 200 gpm for 86 hours. A sample collected at the end of this pumping period was analyzed for PAH by Alpha Analytical in January 2013. The lab report is included on the enclosed disk and indicates no PAH were found above a 10 ng/l reporting limit.

The presence of foreign material in the well brings into question the representativeness of prior samples collected from the well. The City knows of one instance of vandalism that occurred at well W403 in the early 1990s. Foreign materials were found in the well at that time and a driller was hire to remove them. There are no records of that work remaining, and it is not known when the materials that were removed in 2012 entered the well. The City agrees that the pattern of PAH concentrations collected over time in well W403 does not necessarily match with an early 1990s contamination event. It is possible that the material was bridged in the well and fell to its current location at a time that coincides with increased PAH concentrations in the samples. Quarterly sampling is planned for well W403 in 2013 and that data is expected provide a better measure of the PAH concentrations at this location.

439751

County Hennepin
 Quad Minneapolis South
 Quad ID 104A

MINNESOTA DEPARTMENT OF
 HEALTH
**WELL AND
 BORING RECORD**
 Minnesota Statutes Chapter 103I

Entry Date 11/24/1992
 Update Date 04/15/2008
 Received Date

Well Name ST. LOUIS PARK B7-22 Township Range Dir Section Subsections Elevation 865 ft. 28 24 W 7 AACADD Elevation Method 7.5 minute topographic map (+/- 5 feet)				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:25%;">Well Depth</th> <th style="width:25%;">Depth Completed</th> <th style="width:50%;">Date Well Completed</th> </tr> <tr> <td>385 ft.</td> <td>385 ft.</td> <td>03/01/1988</td> </tr> </table> Drilling Method Non-specified Rotary				Well Depth	Depth Completed	Date Well Completed	385 ft.	385 ft.	03/01/1988																																																															
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Well Address INGLEWOOD & 39TH ST MN				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Drilling Fluid Bentonite</td> <td style="width:50%;">Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.</td> </tr> <tr> <td colspan="2">Use Irrigation</td> </tr> </table>				Drilling Fluid Bentonite	Well Hydrofractured? <input type="checkbox"/> Yes <input type="checkbox"/> No From Ft. to Ft.	Use Irrigation																																																																		
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Diameter	Slot/Gauze	Length	Set Between																																																																									
Static Water Level 30 ft. from Land surface Date Measured 02/26/1988																																																																												
PUMPING LEVEL (below land surface) 0 ft. after hrs. pumping 50 g.p.m.																																																																												
				Well Head Completion Pitless adapter manufacturer Model <input type="checkbox"/> Casing Protection <input checked="" type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY)																																																																								
				Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Grout Material: Bentonite from 0 to 235 ft. 3.5 yds. Grout Material: Neat Cement from 0 to 68 ft. 2 yds.																																																																								
				Nearest Known Source of Contamination ___ft ___direction ___type Well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																								
				Pump <input type="checkbox"/> Not Installed Date Installed Manufacturer's name Model number ___ HP ___ Volts Length of drop Pipe ___ft. Capacity ___g.p.m. Type Material																																																																								
				Abandoned Wells Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																								
				Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No																																																																								
				Well Contractor Certification <div style="text-align: right; margin-right: 100px;"><u>27057</u></div> License Business Name Lic. Or Reg. No. Name of Driller																																																																								
				Cuttings Yes First Bedrock Platteville Formation Aquifer Multiple Last Strat Depth to Bedrock 66 ft.																																																																								

City of St. Louis Park
REQUEST FOR PAYMENT

☐ Capital Asset Purchase
☐ Contract Payment

Expenditure incurred in year :	2013	<i>Assigned by Finance</i>
		Vendor ID:

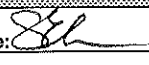
PAYABLE TO: (LEAVE BLANK IF ADDRESS IS INCLUDED ON ATTACHED INVOICE)	SEND TO (IF DIFFERENT THAN "PAYABLE TO" ADDRESS)
Payable To	Keys Well Drilling Company
Street Address	1156 Homer Street
Street Address	
City/State/ZIP	St. Paul, MN 55116-3232
Attention	

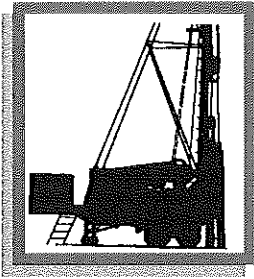
DESCRIPTION OF EXPENDITURE
W403

INVOICE CODING						
Invoice #	Inv. Date (Due in 35 Days or less)	Amount	Business Unit	Account Code (including subsidiary if applicable)	Subledger or Project # (if applicable)	Notes (Up to 30 Characters)
2012142	1/29/2013	\$9,194.74	5050	7206		W403
TOTAL		\$9,194.74				

CONTRACT INFORMATION					
Contract Amt	Payment Amount	Total Paid - To Date (including this payment)	Remaining Amt on Contract	Retainage on this Payment	Total Retainage

CLAIM IN DISPUTE			SPECIAL INSTRUCTIONS	
Invoice #	Reason	Initial	Council Approval Required	
			Send Attached copy	
			Give Check to	

APPROVAL			FINANCE USE ONLY	
Date: 2/1/13	Signature: 		Date Received	
Date:	Signature:		Date Processed	
Date:	Signature:		Approval	
PREPARED BY			Notes	
02/01/13		Signature: Beth Holida		



Keys Well Drilling Company

1156 Homer Street
 St. Paul, MN 55116-3232
 Phone 651-646-7871 Fax 651-641-0216
 Email jkeys@keyswell.com

License: 1347

INVOICE

5050-720%
 W403
 comment

DATE NUMBER

01/29/2013 2012142

Billed To: St. Louis Park Utility Oper.
 7305 Oxford St.
 St. Louis Park MN 55426-4512

Project: St. Louis Pk-Vista Park, W403
 Vista Pk
 Inglewood & 39th St W
 St. Louis Park MN 55426-4512

Due Date: 02/28/2013

Terms: 30DY

Order# Verbal Scott

Description	Price	Unit	Qty	Amount
Well work # 403 Vista Park			1.00	
Mobilize/demobilize rif and equipment	3,500.00	Ls	1.00	3,500.00
DRill out obstructions	225.00	Hr	10.50	2,362.50
INstall and remove test pump, start up, shutdown	200.00	Hr	8.00	1,600.00
Generator rental (weekly continous use charge)	1,000.00	Wk	1.00	1,000.00
Fuel Charge	3.39	gal	216.00	732.24

A service charge of 0.00 18% per annum will be charged on all amounts
 overdue on regular statement dates.

Thank you for your prompt payment!

Non-Taxable Amount:	9,194.74
Taxable Amount:	0.00
Sales Tax:	0.00
Amount Due	9,194.74



W403
11-29-12



W403

11-25-12



W 403
11-29-12



ANALYTICAL REPORT

Lab Number:	L1300787
Client:	Summit Envirosolutions Inc 1217 Bandana Blvd St. Paul, MN 55108
ATTN:	Bill Gregg
Phone:	(651) 262-4236
Project Name:	VISTA MINNESOTA
Project Number:	Not Specified
Report Date:	01/22/13

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1300787-01	VISTA PPB-PAH	Not Specified	01/10/13 11:00

Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

Case Narrative (continued)

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Elizabeth Porta

Title: Technical Director/Representative

Date: 01/22/13

ORGANICS

SEMIVOLATILES

Project Name: VISTA MINNESOTA**Lab Number:** L1300787**Project Number:** Not Specified**Report Date:** 01/22/13**SAMPLE RESULTS**

Lab ID: L1300787-01
Client ID: VISTA PPB-PAH
Sample Location: Not Specified
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 01/17/13 12:00
Analyst: JD

Date Collected: 01/10/13 11:00
Date Received: 01/11/13
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/15/13 09:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	ND		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	ND		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: VISTA MINNESOTA**Lab Number:** L1300787**Project Number:** Not Specified**Report Date:** 01/22/13**SAMPLE RESULTS**

Lab ID: L1300787-01

Date Collected: 01/10/13 11:00

Client ID: VISTA PPB-PAH

Date Received: 01/11/13

Sample Location: Not Specified

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		30-130
Pyrene-d10	87		30-130
Benzo(b)fluoranthene-d12	88		30-130

Project Name: VISTA MINNESOTA

Lab Number: L1300787

Project Number: Not Specified

Report Date: 01/22/13

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM
 Analytical Date: 01/17/13 07:49
 Analyst: JD

Extraction Method: EPA 3510C
 Extraction Date: 01/15/13 09:11

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01 Batch: WG584803-1					
Naphthalene	ND		ng/l	10.0	--
1,4-Dichlorobenzene	ND		ng/l	10.0	--
2-Methylnaphthalene	ND		ng/l	10.0	--
1-Methylnaphthalene	ND		ng/l	10.0	--
Dibenzothiophene	ND		ng/l	10.0	--
2-Chloronaphthalene	ND		ng/l	10.0	--
Biphenyl	ND		ng/l	10.0	--
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--
Acenaphthylene	ND		ng/l	10.0	--
Acenaphthene	ND		ng/l	10.0	--
Fluorene	ND		ng/l	10.0	--
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--
Phenanthrene	ND		ng/l	10.0	--
Anthracene	ND		ng/l	10.0	--
1-Methylphenanthrene	ND		ng/l	10.0	--
Fluoranthene	ND		ng/l	10.0	--
Pyrene	ND		ng/l	10.0	--
Benz(a)anthracene	ND		ng/l	10.0	--
Chrysene	ND		ng/l	10.0	--
Benzo(b)fluoranthene	ND		ng/l	10.0	--
Benzo(k)fluoranthene	ND		ng/l	10.0	--
Benzo(e)Pyrene	ND		ng/l	10.0	--
Benzo(a)pyrene	ND		ng/l	10.0	--
Perylene	ND		ng/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--
Dibenz(a,h)anthracene	ND		ng/l	10.0	--
Benzo(ghi)perylene	ND		ng/l	10.0	--

Project Name: VISTA MINNESOTA**Lab Number:** L1300787**Project Number:** Not Specified**Report Date:** 01/22/13**Method Blank Analysis**
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 01/17/13 07:49
Analyst: JD

Extraction Method: EPA 3510C
Extraction Date: 01/15/13 09:11

Parameter	Result	Qualifier	Units	RL	MDL
-----------	--------	-----------	-------	----	-----

PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01 Batch: WG584803-1

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	73		30-130
Pyrene-d10	89		30-130
Benzo(b)fluoranthene-d12	94		30-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: VISTA MINNESOTA

Project Number: Not Specified

Lab Number: L1300787

Report Date: 01/22/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG584803-2 WG584803-3								
Naphthalene	83		83		40-140	0		30
1,4-Dichlorobenzene	79		80		40-140	1		30
2-Methylnaphthalene	84		85		40-140	1		30
1-Methylnaphthalene	85		86		40-140	1		30
Dibenzothiophene	91		92		40-140	1		30
2-Chloronaphthalene	85		86		40-140	1		30
Biphenyl	84		84		40-140	0		30
2,6-Dimethylnaphthalene	86		86		40-140	0		30
Acenaphthylene	78		77		40-140	1		30
Acenaphthene	85		86		40-140	1		30
Fluorene	90		90		40-140	0		30
2,3,5-Trimethylnaphthalene	88		89		40-140	1		30
Phenanthrene	91		91		40-140	0		30
Anthracene	92		92		40-140	0		30
1-Methylphenanthrene	96		96		40-140	0		30
Fluoranthene	96		95		40-140	1		30
Pyrene	89		89		40-140	0		30
Benz(a)anthracene	97		97		40-140	0		30
Chrysene	88		88		40-140	0		30
Benzo(b)fluoranthene	102		99		40-140	3		30
Benzo(k)fluoranthene	88		88		40-140	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: VISTA MINNESOTA

Project Number: Not Specified

Lab Number: L1300787

Report Date: 01/22/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG584803-2 WG584803-3								
Benzo(e)Pyrene	93		92		40-140	1		30
Benzo(a)pyrene	94		94		40-140	0		30
Perylene	92		92		40-140	0		30
Indeno(1,2,3-cd)Pyrene	108		107		40-140	1		30
Dibenz(a,h)anthracene	97		95		40-140	2		30
Benzo(ghi)perylene	94		93		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	83		83		30-130
Pyrene-d10	89		89		30-130
Benzo(b)fluoranthene-d12	94		93		30-130

Project Name: VISTA MINNESOTA**Project Number:** Not Specified**Lab Number:** L1300787**Report Date:** 01/22/13**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA**Cooler Information Custody Seal****Cooler**

A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1300787-01A	Amber 1000ml unpreserved	A	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1300787-01B	Amber 1000ml unpreserved	A	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)

*Values in parentheses indicate holding time in days



Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report



Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

Data Qualifiers

due to obvious interference.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: VISTA MINNESOTA
Project Number: Not Specified

Lab Number: L1300787
Report Date: 01/22/13

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **TO-15**: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

Serial No:01221314:27

THE LEADER IN ENVIRONMENTAL TESTING

L1300787

TAL-4124-280 (0508)

Client CITY OF ST. LOUIS PARK		Project Manager JOHN LAUMANN		Date 1-10-13	Chain of Custody Number 170126
Address 7305 OXFORD ST.		Telephone Number (Area Code)/Fax Number 952-215-8208		Lab Number	Page _____ of _____

City ST. LOUIS PARK	State MN.	Zip Code 55426	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)	Special Instructions/Conditions of Receipt
Project Name and Location (State) VISTA MINNESOTA			Carrier/Waybill Number			

Contract/Purchase Order/Quote No. PO 5101-303		Matrix				Containers & Preservatives								Analysis (Attach list if more space is needed)	Special Instructions/Conditions of Receipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sec.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH		
VISTA PPB-PAH	1-10-13	11:00					X								
VISTA PPB-PAH	1-10-13	11:00					X								

Possible Hazard Identification				Sample Disposal				(A fee may be assessed if samples are retained longer than 1 month)			
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For _____ Months				

Turn Around Time Required				QC Requirements (Specify)			
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other _____		

1. Relinquished By	Date	Time	1. Received By	Date	Time
			F204		
2. Relinquished By	Date	Time	2. Received By	Date	Time
F204	1/11/13	0950	[Signature]	1/11/13	0950
3. Relinquished By	Date	Time	3. Received By	Date	Time

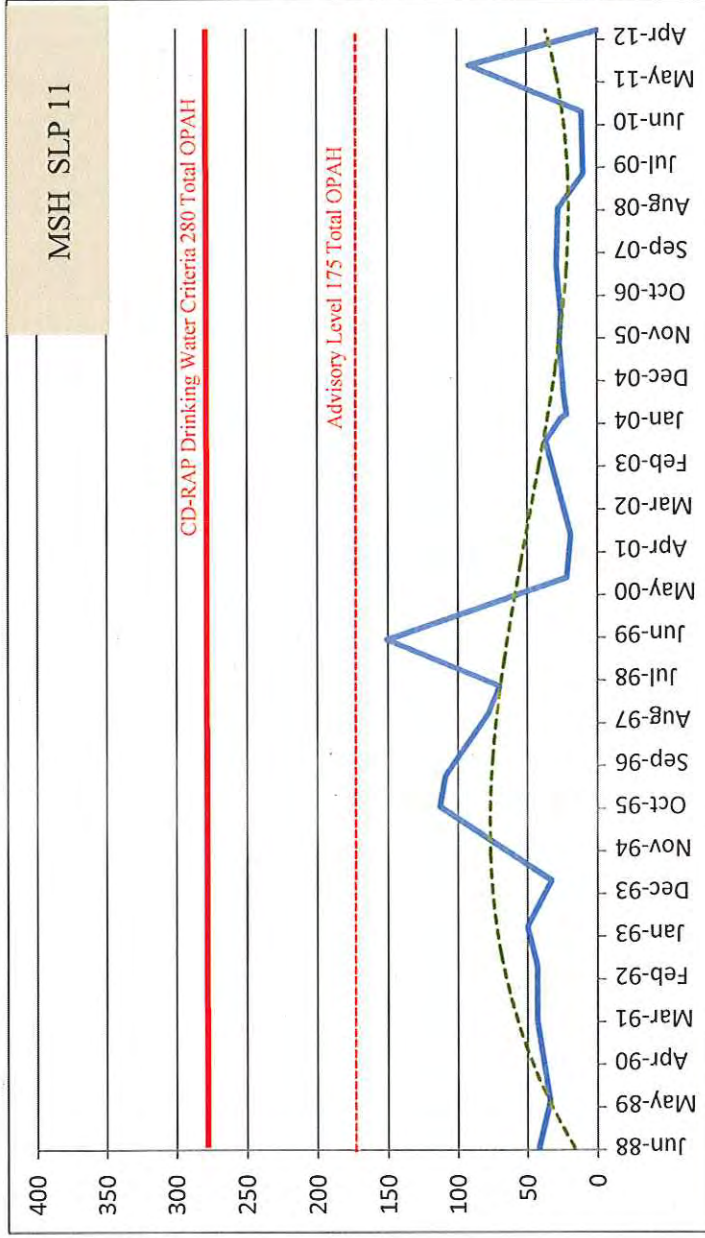
Comments
Send cooler with inserts back to 7305 OXFORD ST. ST. LOUIS PARK, MN. 55426

Appendix C PAH Concentrations Over Time in Municipal Wells

Summary of Total Other PAH

Date Total Other PAH

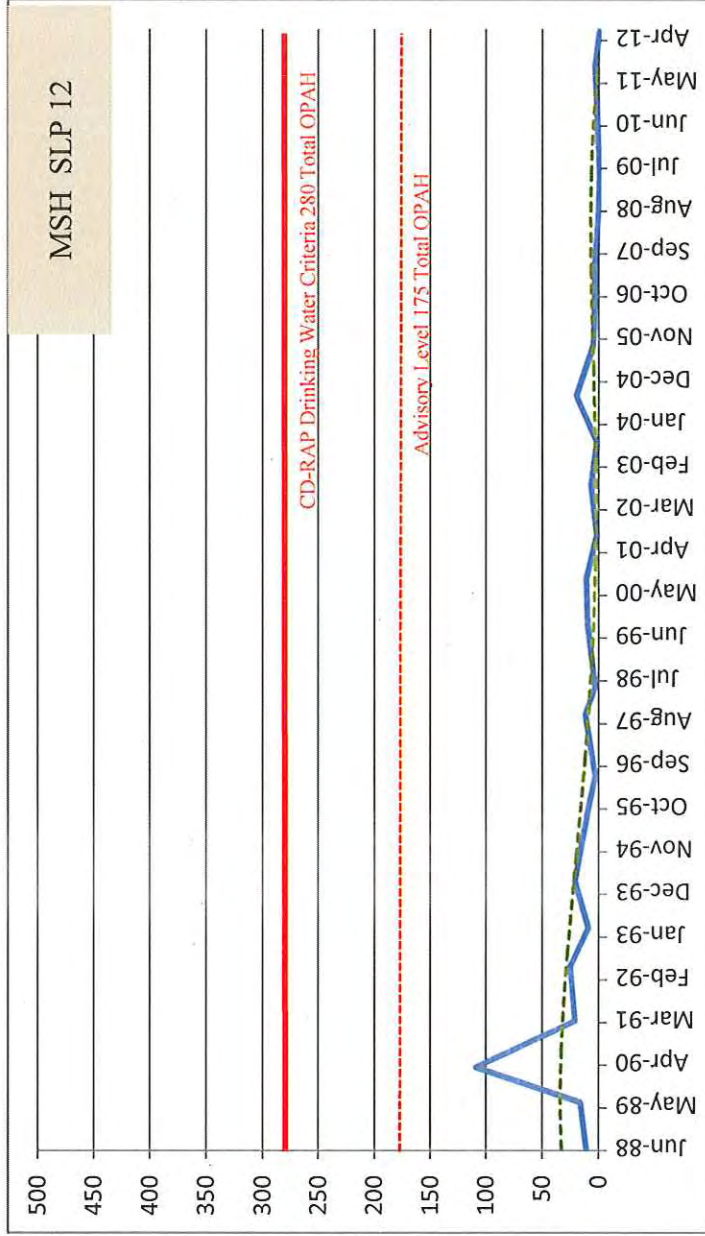
Jun-88	42
Jun-89	34
Mar-91	43
May-92	43
Mar-93	50
Mar-94	33
Oct-95	113
Jun-96	109
Oct-97	78
May-98	70
May-99	151
Sep-00	22
Aug-01	19
Aug-03	37
Feb-04	26
Mar-04	22
Aug-04	24
Sep-05	27
May-06	26
May-07	29
Aug-08	28
May-09	10
Sep-10	11
Sep-11	92
Jun-12	0



Summary of Total Other PAH

Date Total Other PAH

Jun-88	11
Jun-89	16
Mar-90	109
Mar-91	21
May-92	25
Mar-93	9
Mar-94	21
Oct-95	9
Jun-96	3
Oct-97	12
May-98	3
Sep-99	10
Sep-00	11
Aug-01	2
Sep-02	7
Aug-03	2
Aug-04	20
Sep-05	5
Aug-06	4
May-07	4
Aug-08	1
May-09	0
Sep-10	2
Sep-11	4
Jun-12	0

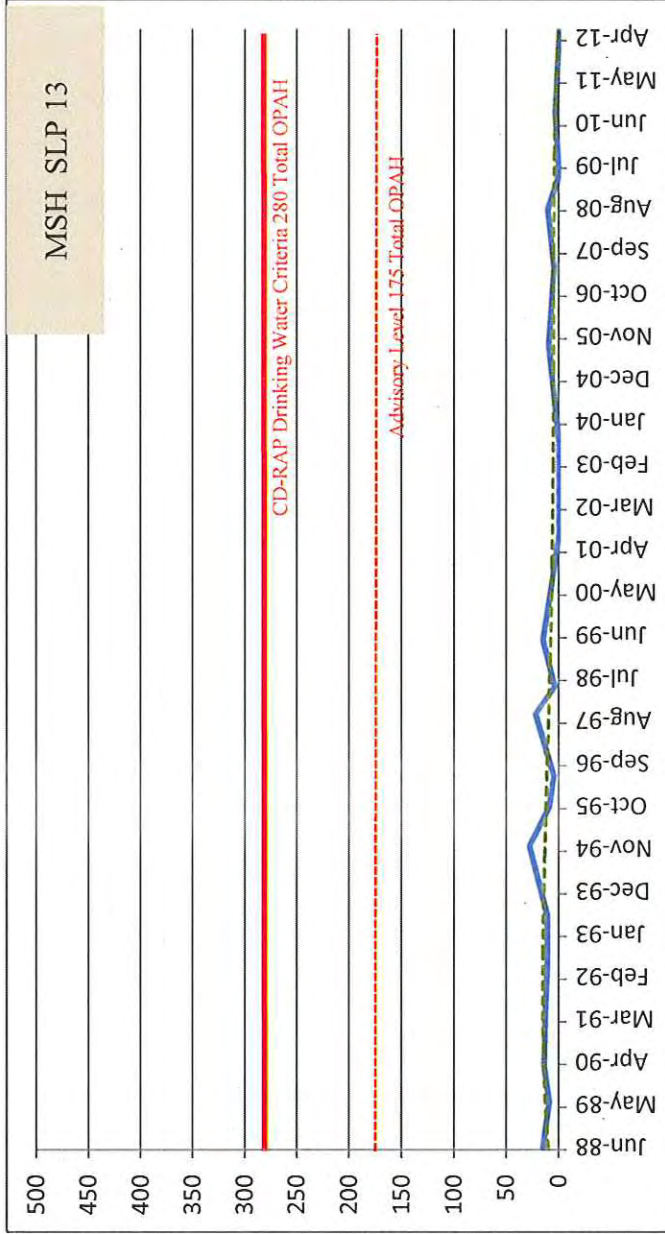


Sample Result
Polynomial Trend (m4)

Summary of Total Other PAH

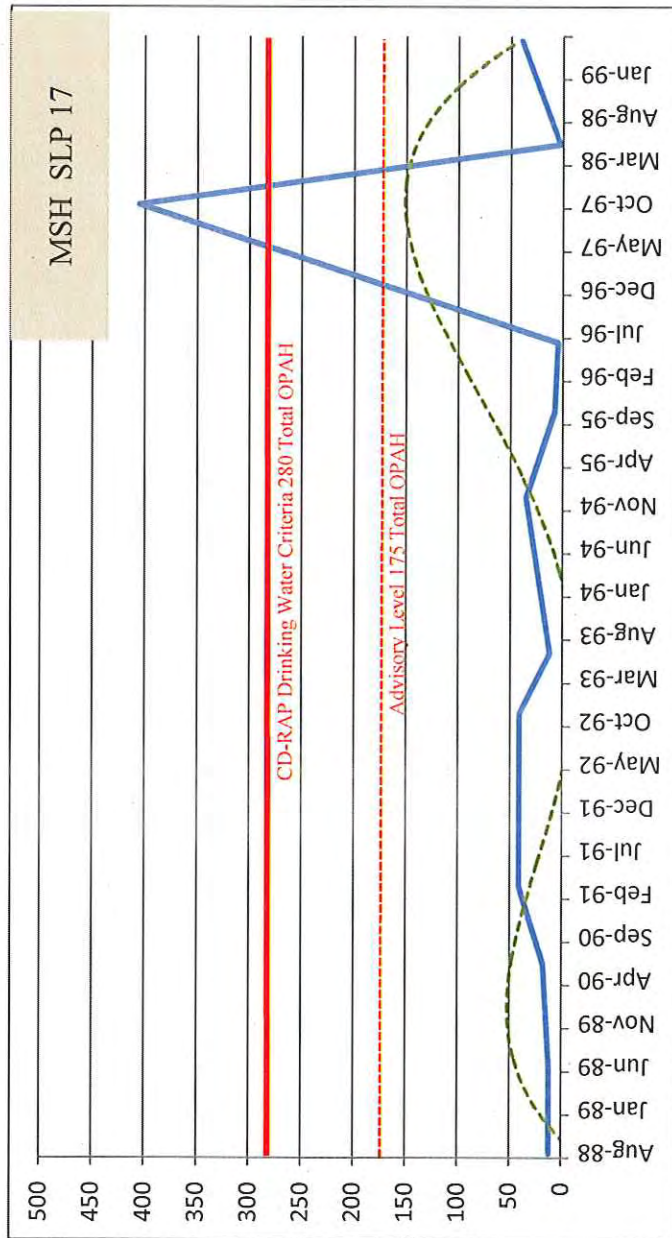
Date Total Other PAH

Jun-88	15
Jun-89	9
Mar-90	14
Mar-91	13
May-92	11
Jun-93	11
Dec-94	28
Oct-95	9
Jun-96	5
Oct-97	22
May-98	4
May-99	15
Sep-00	6
Aug-01	0
Sep-02	0
Aug-03	0
Sep-05	10
May-06	8
May-07	5
Aug-08	11
May-09	0
Sep-10	4
Jun-12	0



Summary of Total Other PAH

Date	Total Other PAH
Aug-88	12
Jun-89	12
Jun-90	18
Mar-91	41
Nov-92	41
Jun-93	12
Dec-94	35
Oct-95	8
Jun-96	5
Oct-97	406
May-98	3
May-99	40

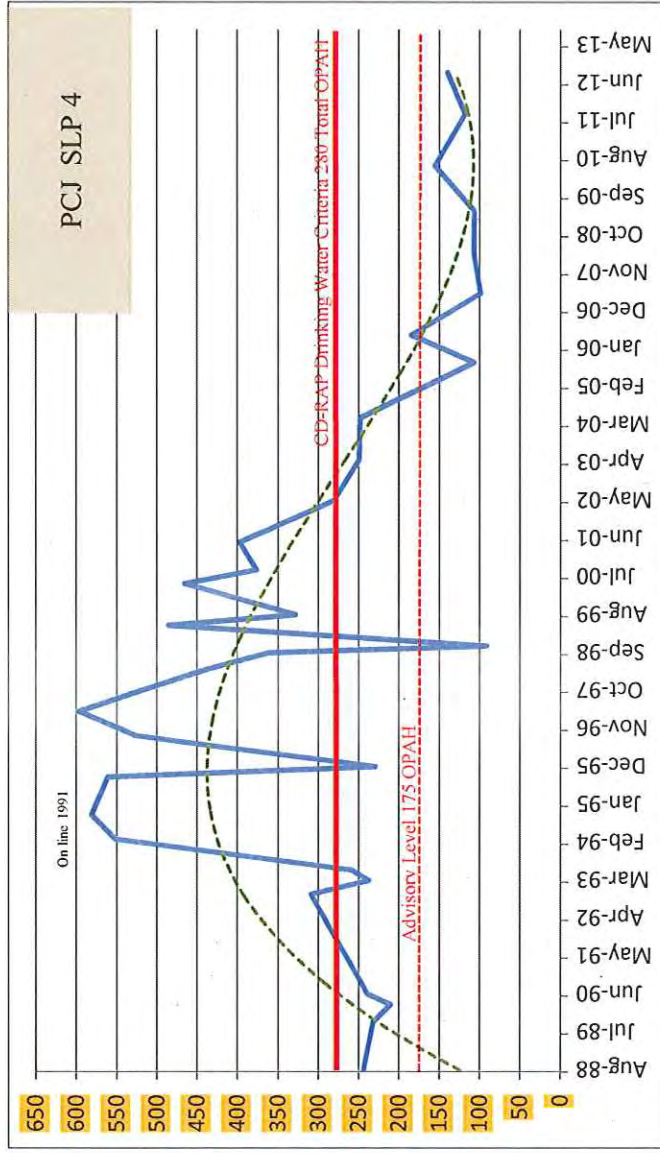


Sample Result
Polynomial Trend (m4)

Summary of Total Other PAH

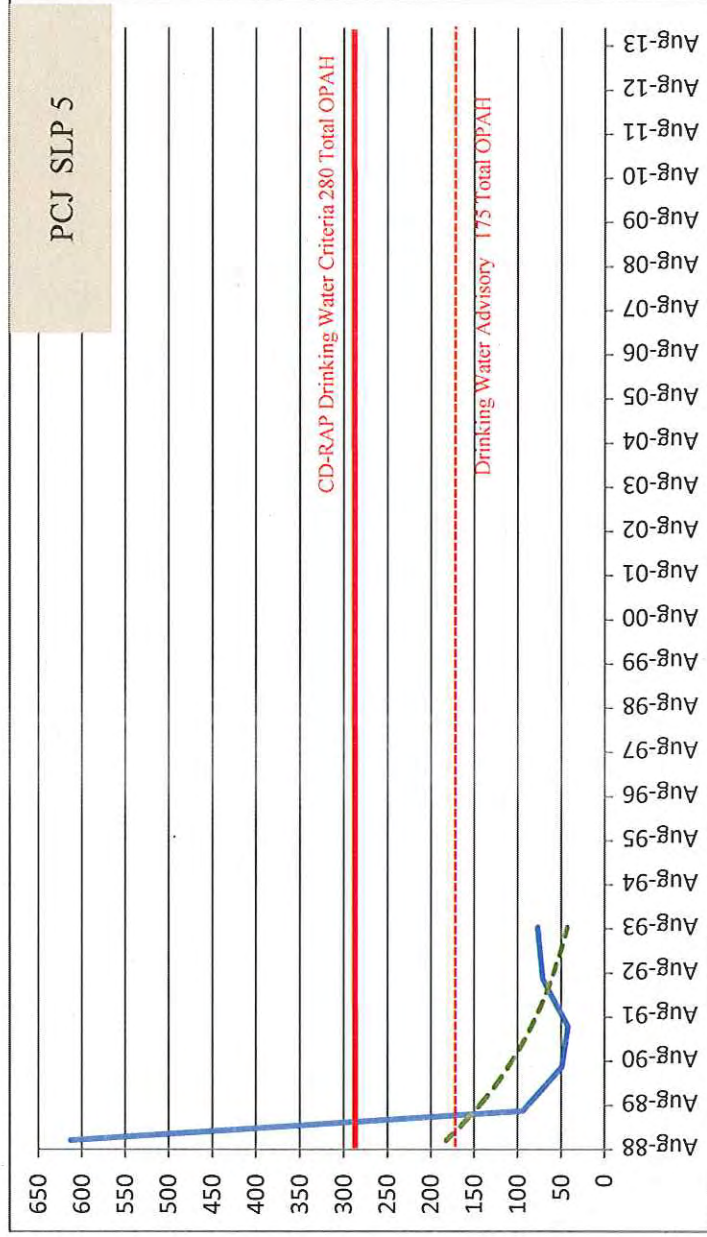
Date Total Other PAH

Aug-88	244
Oct-89	232
Mar-90	210
Jun-90	239
Nov-92	309
Mar-93	237
Jun-93	259
Mar-94	552
Oct-94	581
Sep-95	561
Dec-95	229
Jun-96	431
Sep-96	526
Apr-97	596
Sep-97	533
Apr-98	440
Sep-98	361
Nov-98	91
May-99	485
Aug-99	328
May-00	465
Sep-00	376
May-01	397
May-02	281
May-03	249
May-04	248
Sep-05	107
May-06	185
May-07	99
Apr-08	107
May-09	107
Jun-10	156
Sep-11	118
Sep-12	140



Summary of Total Other PAH

Date	Total Other PAH
Oct-88	613
Jun-89	94
Jun-90	49
May-91	42
Jun-92	71
Aug-93	77



Sample Result
Polynomial Trend (m4)

PCJ SLP 6

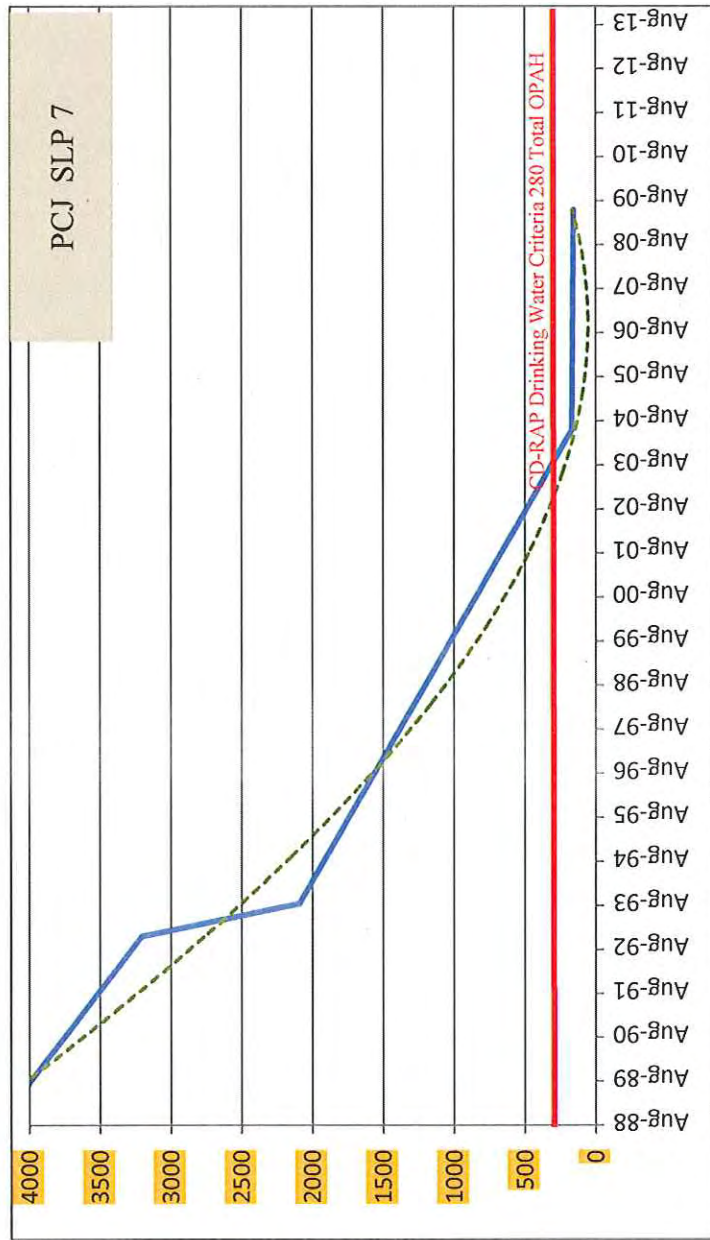
Date	Total Other PAH
Aug-88	33
Oct-88	55
Jun-89	52
Sep-89	36
Oct-89	40
Mar-90	45
Jun-90	80
Aug-90	117
Oct-90	68
Aug-91	123
May-92	123
Nov-92	173
Mar-93	212
Jun-93	113
Feb-94	74
Jun-95	88
Jun-96	180
Aug-96	178

Sample Result	Polynomial Trend (m4)				
205	205	205	205	205	205
197	197	197	197	197	197
188	188	188	188	188	188
194	194	194	194	194	194
127	127	127	127	127	127
275	275	275	275	275	275
220	220	220	220	220	220
151	151	151	151	151	151
196	196	196	196	196	196
139	139	139	139	139	139
219	219	219	219	219	219
178	178	178	178	178	178
124	124	124	124	124	124
165	165	165	165	165	165
137	137	137	137	137	137
238	238	238	238	238	238
235	235	235	235	235	235
161	161	161	161	161	161
244	244	244	244	244	244
187	187	187	187	187	187

Summary of Total Other PAH

Date Total Other PAH

Jun-89 4026
 Nov-92 3206
 Aug-93 2091
 May-04 168
 May-09 157

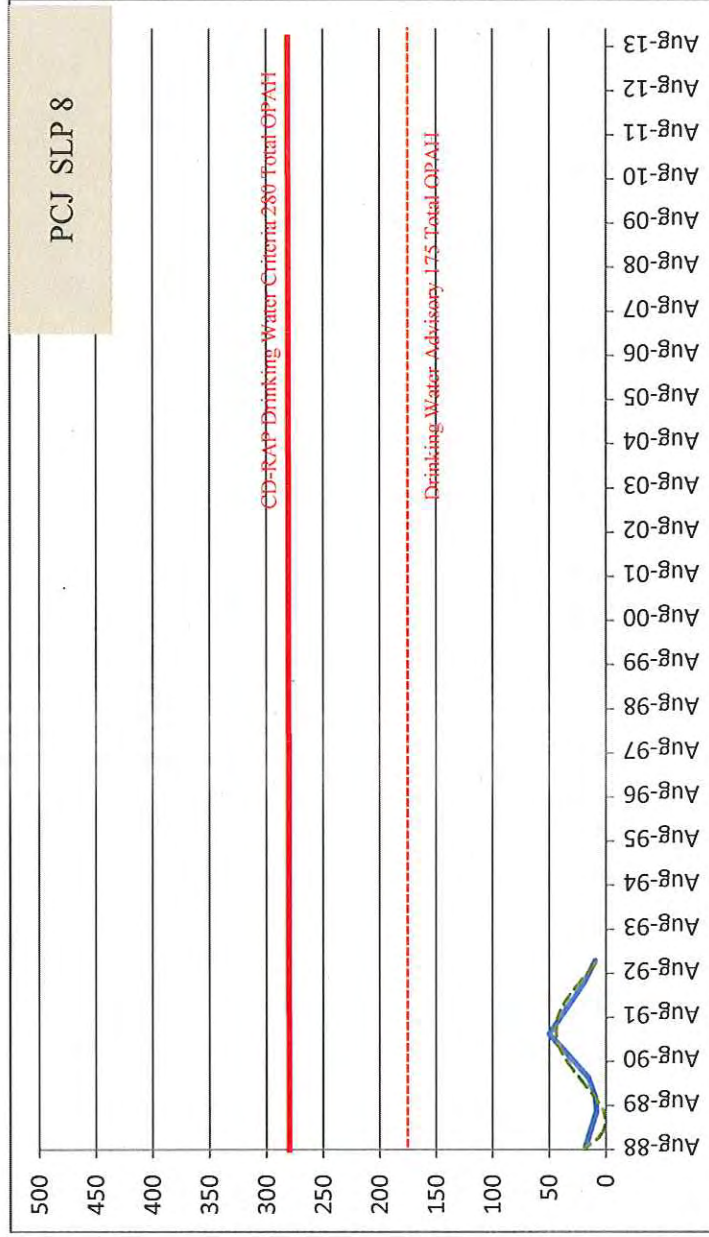


Sample Result
 Polynomial Trend (m4)

Summary of Total Other PAH

Date Total Other PAH

Aug-88 18
 Jun-89 8
 Oct-89 9
 Mar-90 15
 Mar-91 50
 May-92 19
 Nov-92 9



Summary of Total Other PAH

PCJ SLP 9
Monitoring Well

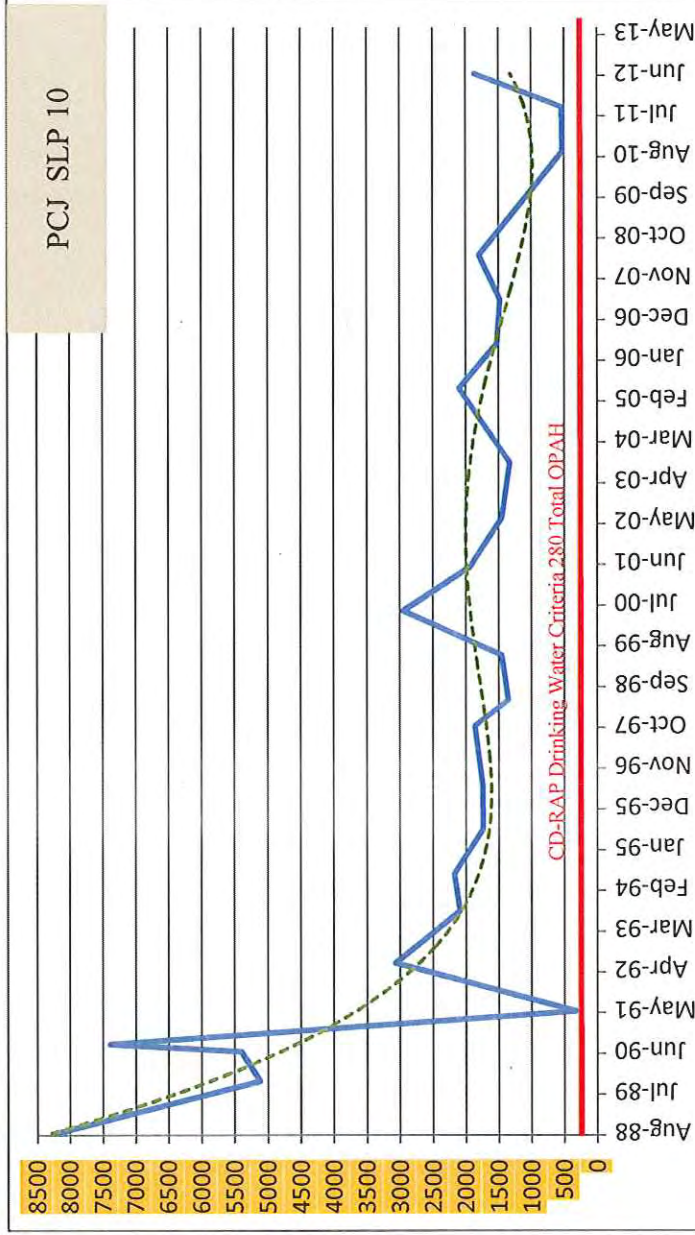
No Data

0

Summary of Total Other PAH

Date Total Other PAH

Aug-88	8200
Oct-89	5120
Jun-90	5403
Aug-90	7386
May-91	315
Jun-92	3070
Aug-93	2091
Jun-94	2174
Jun-95	1737
Jun-96	1742
Oct-97	1859
May-98	1354
May-99	1452
May-00	2947
May-01	1929
Jun-02	1453
Sep-03	1327
May-05	2101
May-06	1524
May-07	1476
May-08	1797
Sep-10	529
Sep-11	537
Jun-12	1870



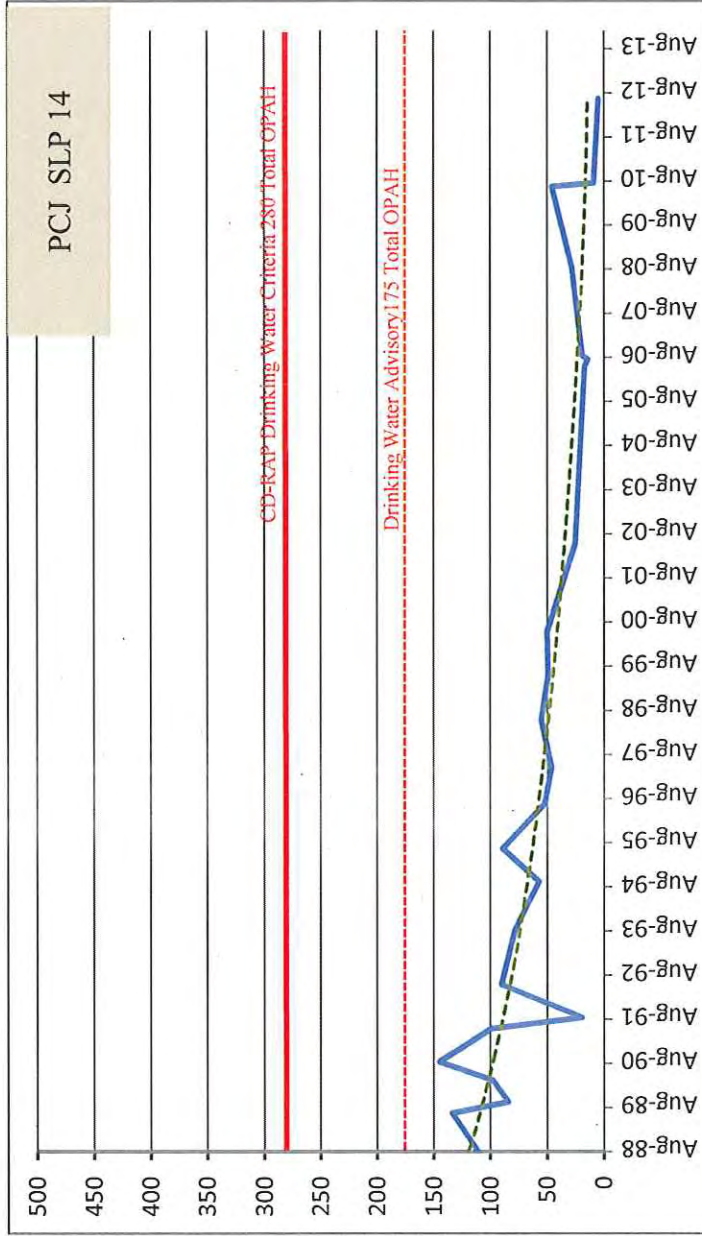
Sample Result

Polynomial Trend (m4)

Summary of Total Other PAH

Date Total Other PAH

Aug-88	112
Jun-89	134
Sep-89	84
Mar-90	98
Aug-90	145
May-91	99
Aug-91	19
May-92	90
Aug-93	78
Sep-94	57
Jun-95	89
Jun-96	52
Apr-97	46
May-98	55
May-99	49
May-00	50
May-02	25
May-06	17
Jul-06	14
Aug-06	19
Aug-08	28
Jun-10	46
Jul-10	10
Jul-10	9
Jun-12	5



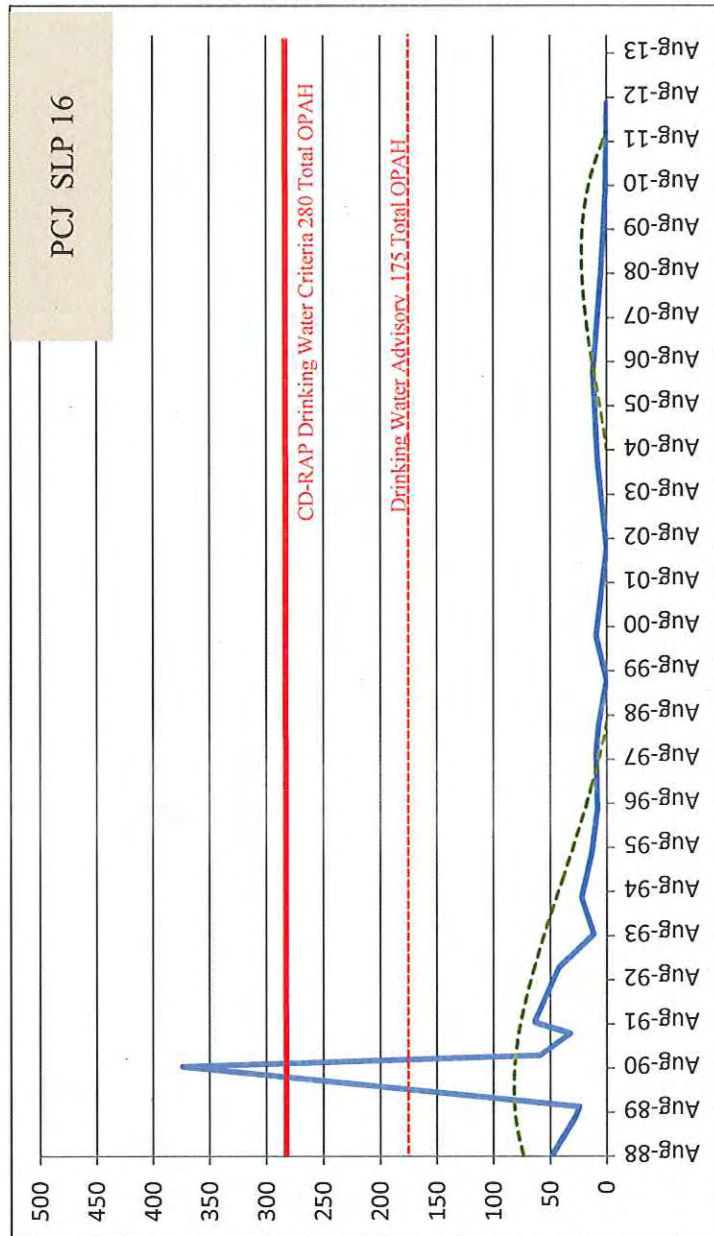
Sample Result

Polynomial Trend (m4)

Summary of Total Other PAH

Date Total Other PAH

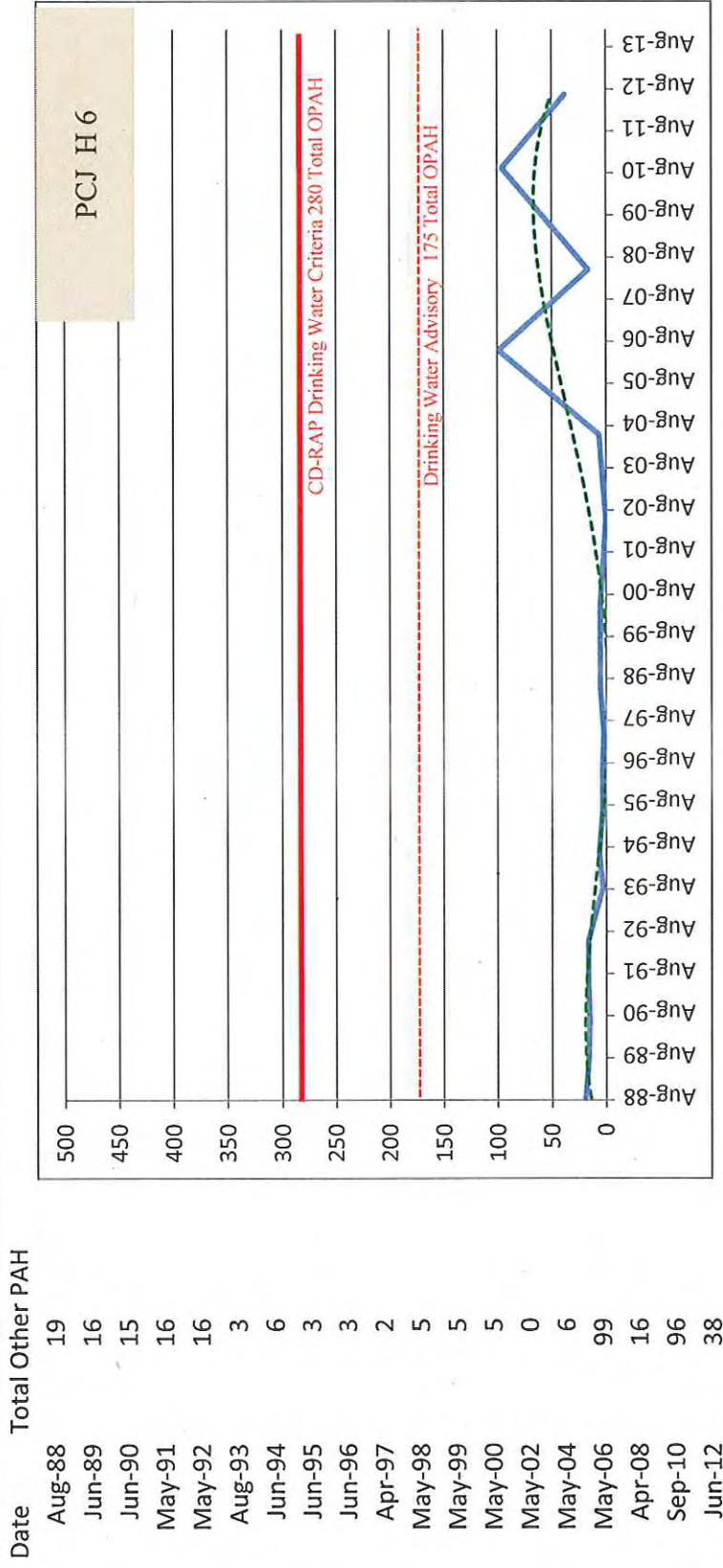
Aug-88	48
Jun-89	28
Sep-89	24
Aug-90	374
Nov-90	59
May-91	32
Aug-91	64
Nov-92	42
Aug-93	11
Jun-94	22
Jun-95	13
Jun-96	8
Sep-97	9
May-98	7
May-99	0
May-00	9
May-02	0
May-04	8
May-06	12
Aug-08	5
Jun-10	1
Jun-12	0



Sample Result

Polynomial Trend (m4)

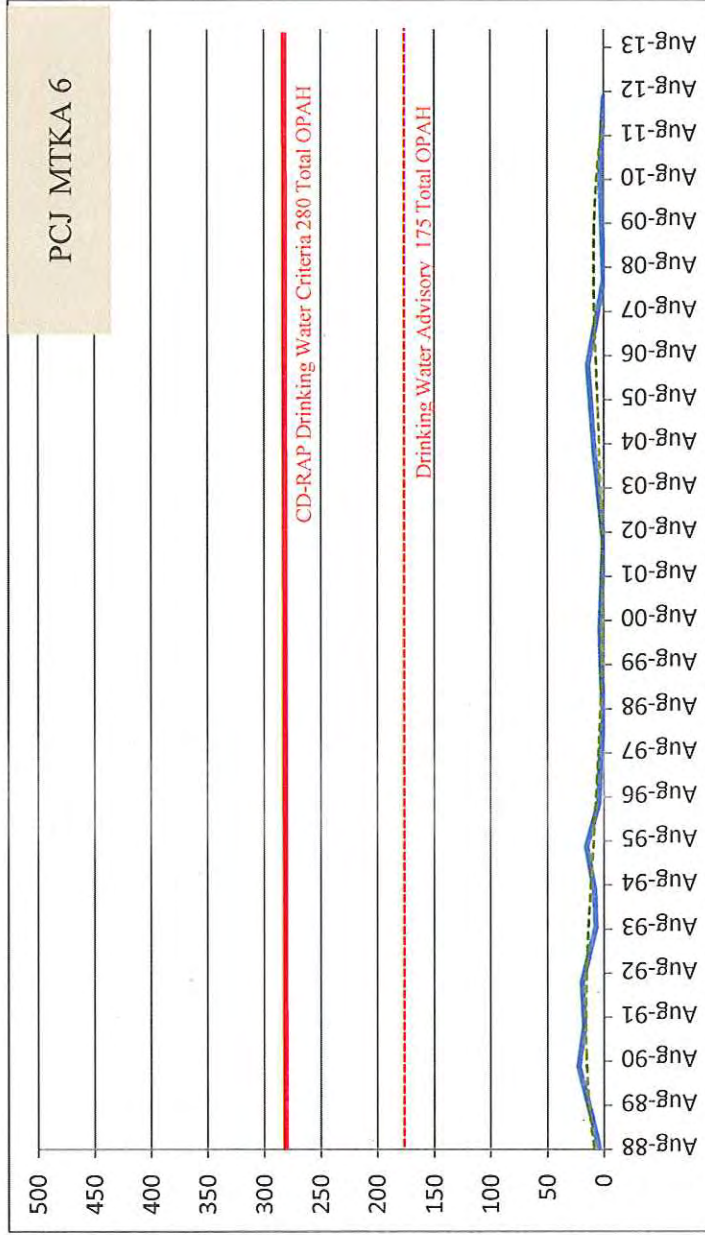
Summary of Total Other PAH



Summary of Total Other PAH

Date Total Other PAH

Aug-88 4
 Jun-89 12
 Jun-90 22
 May-91 17
 May-92 19
 Aug-93 7
 Jun-94 8
 Jun-95 15
 Jun-96 4
 Apr-97 3
 May-98 0
 May-99 2
 May-00 3
 May-02 0
 May-04 8
 May-06 14
 Apr-08 0
 Sep-10 3
 Jun-12 0



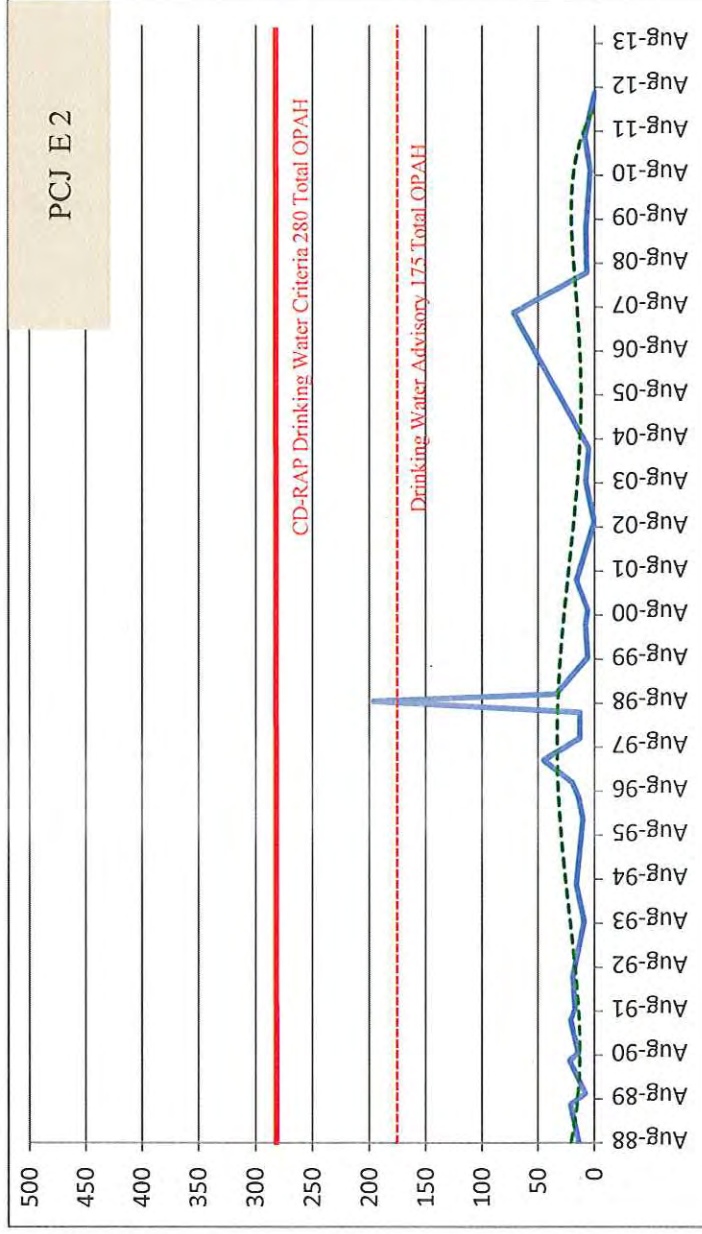
Sample Result

Polynomial Trend (m4)

Summary of Total Other PAH

Date Total Other PAH

Aug-88	14
Jun-89	21
Sep-89	8
Jun-90	22
Aug-90	14
May-91	21
Aug-91	17
May-92	19
Aug-93	9
Jun-94	16
Dec-95	10
Jun-96	14
Oct-96	20
Apr-97	45
Oct-97	13
May-98	13
Aug-98	196
Oct-98	34
Aug-99	6
May-00	8
Sep-00	6
May-01	16
Sep-02	0
Aug-03	8
May-04	5
Jun-07	72
May-08	7
May-09	8
Sep-10	4
Jun-11	9
Jun-12	0



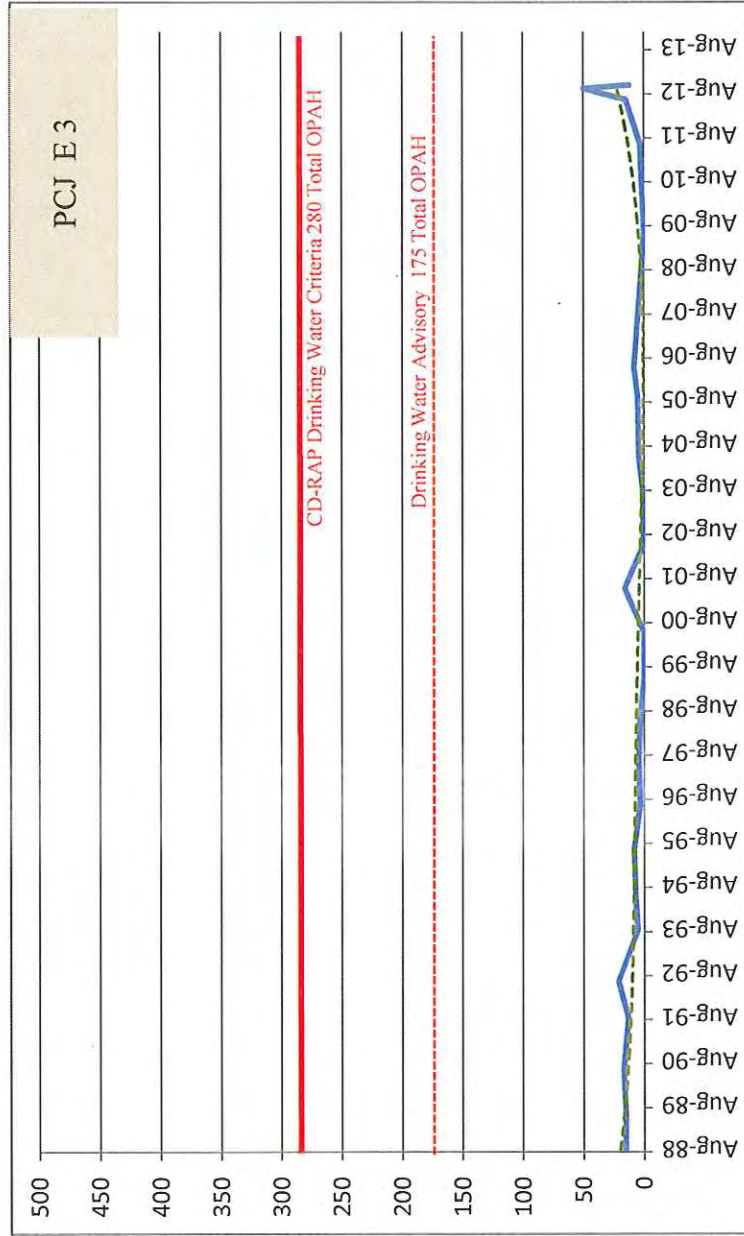
Sample Result

Polynomial Trend (m4)

Summary of Total Other PAH

Date Total Other PAH

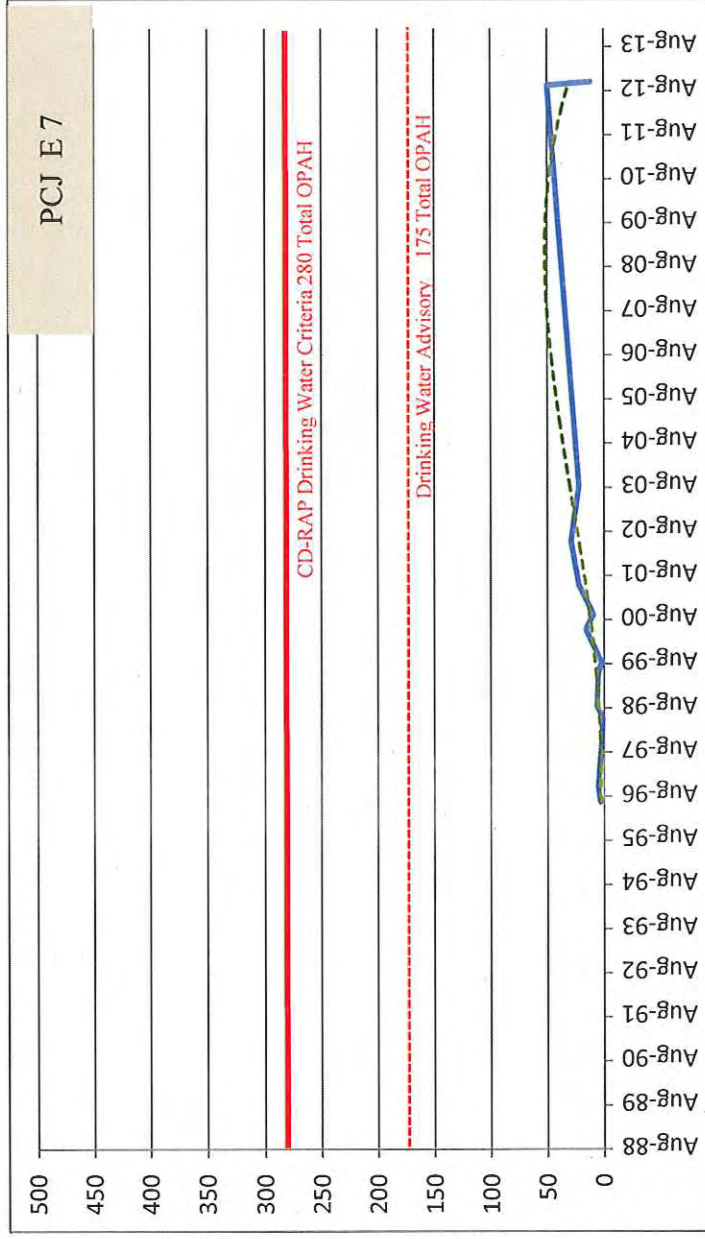
Aug-88	15
Jun-89	15
Jun-90	17
Aug-91	13
Jun-92	21
Aug-93	5
Jun-94	7
Jun-95	8
Jun-96	3
Jun-97	4
May-98	3
May-99	0
May-00	0
May-01	16
May-02	0
Aug-03	1
May-04	4
Sep-05	5
May-06	8
May-09	0
Sep-10	2
Jun-11	3
Jun-12	15
Sep-12	50
Oct-12	12



Sample Results
Polynomial Trend (m4)

Summary of Total Other PAH

Date	Total Other PAH
Jun-96	3
Oct-96	5
Jun-97	3
Oct-97	2
May-98	1
Aug-98	6
May-99	5
Aug-99	2
May-00	16
Sep-00	9
May-01	22
May-02	29
Aug-03	22
9/1/12	50
10/1/12	12

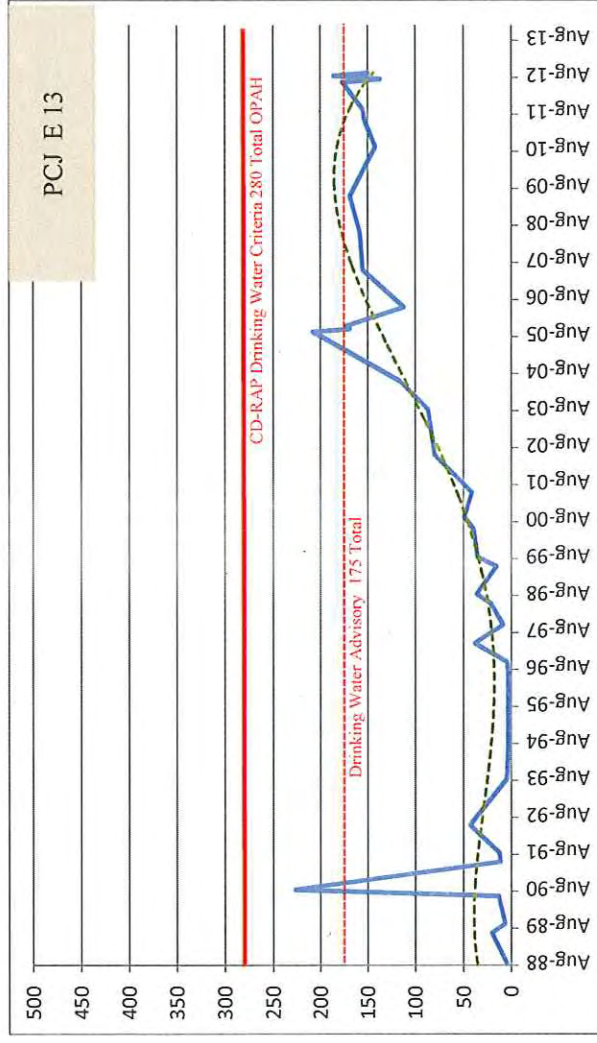


Sample Result
Polynomial Trend (m4)

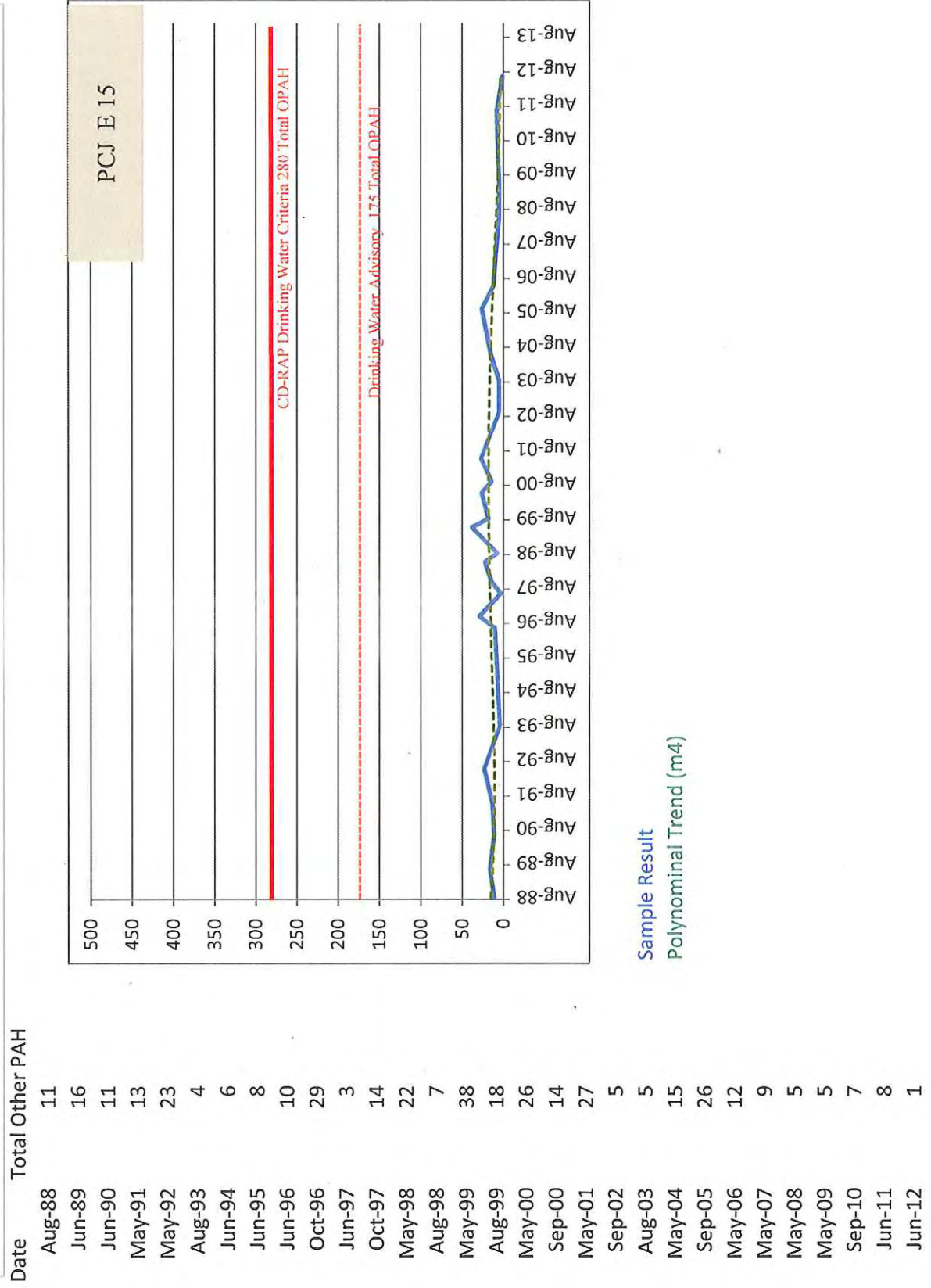
Summary of Total Other PAH

Date Total Other PAH

Aug-88	4
Jun-89	20
Sep-89	6
Jun-90	13
Aug-90	227
May-91	11
Aug-91	12
May-92	43
Aug-93	4
Jun-94	3
Jun-96	3
Oct-96	4
Apr-97	38
Oct-97	8
May-98	21
Aug-98	36
May-99	15
Aug-99	35
May-00	39
Sep-00	49
May-01	41
May-02	80
Aug-03	87
May-04	116
Sep-05	208
Oct-05	169
Nov-05	172
May-06	112
May-07	155
May-08	158
May-09	169
Sep-10	142
Jun-11	154
Sep-11	155
Jun-12	177
Jul-12	137
Aug-12	186
Sep-12	150



Summary of Total Other PAH



2012 Annual Monitoring Report
Reilly Site, St. Louis Park, MN

Laboratory Data Packages and
Validation Reports

Pace Analytical Services, Inc.

Alpha Analytical

TestAmerica

April 06, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009-400 SLP REILLY
Pace Project No.: 10186833

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on March 26, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Idaho Certification #: MN00064

Illinois Certification #: 200011

Iowa Certification #: 368

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New Mexico Certification #: Pace

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: D9921

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Washington Certification #: C754

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

Page 2 of 12

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SAMPLE SUMMARY

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10186833001	W420 - 032612	Water	03/26/12 15:35	03/26/12 16:47
10186833002	W421D - 032612	Water	03/26/12 15:50	03/26/12 16:47
10186833003	W421FB - 032612	Water	03/26/12 15:55	03/26/12 16:47
10186833004	W421 - 032612	Water	03/26/12 15:45	03/26/12 16:47

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10186833001	W420 - 032612	EPA 8270 by SIM	DRE	18
10186833002	W421D - 032612	EPA 8270 by SIM	DRE	18
10186833003	W421FB - 032612	EPA 8270 by SIM	DRE	18
10186833004	W421 - 032612	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

Page 4 of 12

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ANALYTICAL RESULTS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Sample: W420 - 032612		Lab ID: 10186833001		Collected: 03/26/12 15:35		Received: 03/26/12 16:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	122 ug/L		2.1	0.26	50	03/28/12 07:23	04/02/12 16:52	83-32-9	
Acenaphthylene	0.50 ug/L		0.042	0.0042	1	03/28/12 07:23	03/30/12 18:59	208-96-8	
Anthracene	1.8 ug/L		0.042	0.0083	1	03/28/12 07:23	03/30/12 18:59	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0083	1	03/28/12 07:23	03/30/12 18:59	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.010	1	03/28/12 07:23	03/30/12 18:59	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.042	0.010	1	03/28/12 07:23	03/30/12 18:59	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.010	1	03/28/12 07:23	03/30/12 18:59	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0094	1	03/28/12 07:23	03/30/12 18:59	207-08-9	
Chrysene	ND ug/L		0.042	0.0094	1	03/28/12 07:23	03/30/12 18:59	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0094	1	03/28/12 07:23	03/30/12 18:59	53-70-3	
Fluoranthene	1.0 ug/L		0.042	0.012	1	03/28/12 07:23	03/30/12 18:59	206-44-0	
Fluorene	42.2 ug/L		2.1	0.21	50	03/28/12 07:23	04/02/12 16:52	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.010	1	03/28/12 07:23	03/30/12 18:59	193-39-5	
Naphthalene	1480 ug/L		20.8	3.1	500	03/28/12 07:23	04/03/12 14:20	91-20-3	
Phenanthrene	38.3 ug/L		2.1	0.42	50	03/28/12 07:23	04/02/12 16:52	85-01-8	
Pyrene	0.53 ug/L		0.042	0.014	1	03/28/12 07:23	03/30/12 18:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	89 %		58-125		1	03/28/12 07:23	03/30/12 18:59	321-60-8	
Terphenyl-d14 (S)	98 %		75-125		1	03/28/12 07:23	03/30/12 18:59	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Sample: W421D - 032612		Lab ID: 10186833002		Collected: 03/26/12 15:50		Received: 03/26/12 16:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	502	ug/L	2.1	0.27	50	03/28/12 07:23	04/02/12 15:57	83-32-9	
Acenaphthylene	6.9	ug/L	0.043	0.0043	1	03/28/12 07:23	03/30/12 19:41	208-96-8	
Anthracene	150	ug/L	2.1	0.43	50	03/28/12 07:23	04/02/12 15:57	120-12-7	
Benzo(a)anthracene	123	ug/L	2.1	0.43	50	03/28/12 07:23	04/02/12 15:57	56-55-3	
Benzo(a)pyrene	81.8	ug/L	2.1	0.53	50	03/28/12 07:23	04/02/12 15:57	50-32-8	
Benzo(b)fluoranthene	106	ug/L	2.1	0.53	50	03/28/12 07:23	04/02/12 15:57	205-99-2	
Benzo(g,h,i)perylene	36.7	ug/L	2.1	0.53	50	03/28/12 07:23	04/02/12 15:57	191-24-2	
Benzo(k)fluoranthene	45.1	ug/L	2.1	0.48	50	03/28/12 07:23	04/02/12 15:57	207-08-9	
Chrysene	95.0	ug/L	2.1	0.48	50	03/28/12 07:23	04/02/12 15:57	218-01-9	
Dibenz(a,h)anthracene	9.8	ug/L	0.043	0.0096	1	03/28/12 07:23	03/30/12 19:41	53-70-3	
Fluoranthene	422	ug/L	21.3	6.4	500	03/28/12 07:23	04/03/12 13:38	206-44-0	
Fluorene	356	ug/L	2.1	0.21	50	03/28/12 07:23	04/02/12 15:57	86-73-7	
Indeno(1,2,3-cd)pyrene	30.1	ug/L	2.1	0.53	50	03/28/12 07:23	04/02/12 15:57	193-39-5	
Naphthalene	1670	ug/L	21.3	3.2	500	03/28/12 07:23	04/03/12 13:38	91-20-3	
Phenanthrene	867	ug/L	21.3	4.3	500	03/28/12 07:23	04/03/12 13:38	85-01-8	
Pyrene	374	ug/L	2.1	0.69	50	03/28/12 07:23	04/02/12 15:57	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	58-125		1	03/28/12 07:23	03/30/12 19:41	321-60-8	
Terphenyl-d14 (S)	73	%	75-125		1	03/28/12 07:23	03/30/12 19:41	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Sample: W421FB - 032612		Lab ID: 10186833003	Collected: 03/26/12 15:55	Received: 03/26/12 16:47	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.040	0.0051	1	03/28/12 07:23	03/30/12 19:20	83-32-9	
Acenaphthylene	ND	ug/L	0.040	0.0040	1	03/28/12 07:23	03/30/12 19:20	208-96-8	
Anthracene	ND	ug/L	0.040	0.0081	1	03/28/12 07:23	03/30/12 19:20	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.040	0.0081	1	03/28/12 07:23	03/30/12 19:20	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.040	0.010	1	03/28/12 07:23	03/30/12 19:20	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.040	0.010	1	03/28/12 07:23	03/30/12 19:20	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.040	0.010	1	03/28/12 07:23	03/30/12 19:20	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.040	0.0091	1	03/28/12 07:23	03/30/12 19:20	207-08-9	
Chrysene	ND	ug/L	0.040	0.0091	1	03/28/12 07:23	03/30/12 19:20	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.040	0.0091	1	03/28/12 07:23	03/30/12 19:20	53-70-3	
Fluoranthene	ND	ug/L	0.040	0.012	1	03/28/12 07:23	03/30/12 19:20	206-44-0	
Fluorene	ND	ug/L	0.040	0.0040	1	03/28/12 07:23	03/30/12 19:20	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.040	0.010	1	03/28/12 07:23	03/30/12 19:20	193-39-5	
Naphthalene	0.058	ug/L	0.040	0.0061	1	03/28/12 07:23	03/30/12 19:20	91-20-3	
Phenanthrene	ND	ug/L	0.040	0.0081	1	03/28/12 07:23	03/30/12 19:20	85-01-8	
Pyrene	ND	ug/L	0.040	0.013	1	03/28/12 07:23	03/30/12 19:20	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	89 %		58-125		1	03/28/12 07:23	03/30/12 19:20	321-60-8	
Terphenyl-d14 (S)	93 %		75-125		1	03/28/12 07:23	03/30/12 19:20	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Sample: W421 - 032612		Lab ID: 10186833004		Collected: 03/26/12 15:45		Received: 03/26/12 16:47		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	446	ug/L	2.4	0.29	50	03/28/12 07:23	04/02/12 16:18	83-32-9	
Acenaphthylene	9.1	ug/L	2.4	0.24	50	03/28/12 07:23	04/02/12 16:18	208-96-8	
Anthracene	122	ug/L	2.4	0.47	50	03/28/12 07:23	04/02/12 16:18	120-12-7	
Benzo(a)anthracene	97.2	ug/L	2.4	0.47	50	03/28/12 07:23	04/02/12 16:18	56-55-3	
Benzo(a)pyrene	64.2	ug/L	2.4	0.59	50	03/28/12 07:23	04/02/12 16:18	50-32-8	
Benzo(b)fluoranthene	83.7	ug/L	2.4	0.59	50	03/28/12 07:23	04/02/12 16:18	205-99-2	
Benzo(g,h,i)perylene	29.0	ug/L	2.4	0.59	50	03/28/12 07:23	04/02/12 16:18	191-24-2	
Benzo(k)fluoranthene	34.1	ug/L	2.4	0.53	50	03/28/12 07:23	04/02/12 16:18	207-08-9	
Chrysene	76.7	ug/L	2.4	0.53	50	03/28/12 07:23	04/02/12 16:18	218-01-9	
Dibenz(a,h)anthracene	9.0	ug/L	2.4	0.53	50	03/28/12 07:23	04/02/12 16:18	53-70-3	
Fluoranthene	402	ug/L	2.4	0.71	50	03/28/12 07:23	04/02/12 16:18	206-44-0	
Fluorene	317	ug/L	2.4	0.24	50	03/28/12 07:23	04/02/12 16:18	86-73-7	
Indeno(1,2,3-cd)pyrene	23.6	ug/L	2.4	0.59	50	03/28/12 07:23	04/02/12 16:18	193-39-5	
Naphthalene	1880	ug/L	23.5	3.5	500	03/28/12 07:23	04/03/12 13:59	91-20-3	
Phenanthrene	817	ug/L	23.5	4.7	500	03/28/12 07:23	04/03/12 13:59	85-01-8	
Pyrene	299	ug/L	2.4	0.76	50	03/28/12 07:23	04/02/12 16:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	95 %		58-125		50	03/28/12 07:23	04/02/12 16:18	321-60-8	
Terphenyl-d14 (S)	97 %		75-125		50	03/28/12 07:23	04/02/12 16:18	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

QC Batch: OEXT/18169 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 10186833001, 10186833002, 10186833003, 10186833004

METHOD BLANK: 1162846 Matrix: Water

Associated Lab Samples: 10186833001, 10186833002, 10186833003, 10186833004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	03/30/12 15:32	
Acenaphthylene	ug/L	ND	0.040	03/30/12 15:32	
Anthracene	ug/L	ND	0.040	03/30/12 15:32	
Benzo(a)anthracene	ug/L	ND	0.040	03/30/12 15:32	
Benzo(a)pyrene	ug/L	ND	0.040	03/30/12 15:32	
Benzo(b)fluoranthene	ug/L	ND	0.040	03/30/12 15:32	
Benzo(g,h,i)perylene	ug/L	ND	0.040	03/30/12 15:32	
Benzo(k)fluoranthene	ug/L	ND	0.040	03/30/12 15:32	
Chrysene	ug/L	ND	0.040	03/30/12 15:32	
Dibenz(a,h)anthracene	ug/L	ND	0.040	03/30/12 15:32	
Fluoranthene	ug/L	ND	0.040	03/30/12 15:32	
Fluorene	ug/L	ND	0.040	03/30/12 15:32	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	03/30/12 15:32	
Naphthalene	ug/L	ND	0.040	03/30/12 15:32	
Phenanthrene	ug/L	ND	0.040	03/30/12 15:32	
Pyrene	ug/L	ND	0.040	03/30/12 15:32	
2-Fluorobiphenyl (S)	%	88	58-125	03/30/12 15:32	
Terphenyl-d14 (S)	%	101	75-125	03/30/12 15:32	

LABORATORY CONTROL SAMPLE: 1162847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.66	66	56-125	
Acenaphthylene	ug/L	1	0.66	66	55-125	
Anthracene	ug/L	1	0.75	75	63-125	
Benzo(a)anthracene	ug/L	1	0.75	75	61-125	
Benzo(a)pyrene	ug/L	1	0.78	78	67-125	
Benzo(b)fluoranthene	ug/L	1	0.74	74	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.74	74	68-125	
Benzo(k)fluoranthene	ug/L	1	0.80	80	60-125	
Chrysene	ug/L	1	0.73	73	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.73	73	60-125	
Fluoranthene	ug/L	1	0.75	75	64-125	
Fluorene	ug/L	1	0.68	68	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.75	75	67-125	
Naphthalene	ug/L	1	0.62	62	53-125	
Phenanthrene	ug/L	1	0.74	74	64-125	
Pyrene	ug/L	1	0.78	78	64-125	
2-Fluorobiphenyl (S)	%			82	58-125	
Terphenyl-d14 (S)	%			96	75-125	

Date: 04/06/2012 09:45 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162848 1162849											
Parameter	Units	10186739002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1.1	1.1	0.61	0.73	57	69	55-125	19	30
Acenaphthylene	ug/L	ND	1.1	1.1	0.58	0.71	54	67	55-125	21	30 M1
Anthracene	ug/L	ND	1.1	1.1	0.61	0.79	57	75	60-125	26	30 M1
Benzo(a)anthracene	ug/L	ND	1.1	1.1	0.63	0.81	60	77	55-125	24	30
Benzo(a)pyrene	ug/L	ND	1.1	1.1	0.65	0.84	61	80	61-125	26	30
Benzo(b)fluoranthene	ug/L	ND	1.1	1.1	0.63	0.76	60	73	58-125	19	30
Benzo(g,h,i)perylene	ug/L	ND	1.1	1.1	0.62	0.79	58	75	63-125	25	30 M1
Benzo(k)fluoranthene	ug/L	ND	1.1	1.1	0.64	0.87	61	82	55-125	29	30
Chrysene	ug/L	ND	1.1	1.1	0.62	0.80	59	76	61-125	24	30 M1
Dibenz(a,h)anthracene	ug/L	ND	1.1	1.1	0.62	0.80	58	76	60-125	26	30 M1
Fluoranthene	ug/L	ND	1.1	1.1	0.61	0.78	58	75	68-125	24	30 M1
Fluorene	ug/L	ND	1.1	1.1	0.59	0.74	56	70	60-125	22	30 M1
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.1	1.1	0.62	0.79	58	76	59-125	25	30 M1
Naphthalene	ug/L	ND	1.1	1.1	0.58	0.66	54	63	50-125	13	30
Phenanthrene	ug/L	ND	1.1	1.1	0.63	0.80	59	76	53-125	24	30
Pyrene	ug/L	ND	1.1	1.1	0.65	0.83	61	79	57-125	24	30
2-Fluorobiphenyl (S)	%						71	85	58-125		
Terphenyl-d14 (S)	%						77	97	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162850 1162851											
Parameter	Units	10186921001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1.1	1.1	0.65	0.81	60	72	55-125	22	30
Acenaphthylene	ug/L	ND	1.1	1.1	0.61	0.80	56	71	55-125	27	30
Anthracene	ug/L	ND	1.1	1.1	0.79	0.88	72	79	60-125	12	30
Benzo(a)anthracene	ug/L	ND	1.1	1.1	0.79	0.86	72	77	55-125	9	30
Benzo(a)pyrene	ug/L	ND	1.1	1.1	0.83	0.89	76	79	61-125	7	30
Benzo(b)fluoranthene	ug/L	ND	1.1	1.1	0.76	0.81	70	72	58-125	6	30
Benzo(g,h,i)perylene	ug/L	ND	1.1	1.1	0.77	0.84	71	75	63-125	8	30
Benzo(k)fluoranthene	ug/L	ND	1.1	1.1	0.85	0.93	78	83	55-125	9	30
Chrysene	ug/L	ND	1.1	1.1	0.79	0.83	73	74	61-125	5	30
Dibenz(a,h)anthracene	ug/L	ND	1.1	1.1	0.79	0.86	73	76	60-125	8	30
Fluoranthene	ug/L	ND	1.1	1.1	0.78	0.86	72	76	68-125	10	30
Fluorene	ug/L	ND	1.1	1.1	0.67	0.81	62	72	60-125	20	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.1	1.1	0.79	0.85	72	75	59-125	7	30
Naphthalene	ug/L	ND	1.1	1.1	0.80	0.79	74	70	50-125	2	30
Phenanthrene	ug/L	ND	1.1	1.1	0.79	0.86	72	77	53-125	9	30
Pyrene	ug/L	ND	1.1	1.1	0.81	0.88	75	78	57-125	8	30
2-Fluorobiphenyl (S)	%						73	92	58-125		
Terphenyl-d14 (S)	%						93	96	75-125		

QUALIFIERS

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009-400 SLP REILLY

Pace Project No.: 10186833

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10186833001	W420 - 032612	EPA 3510	OEXT/18169	EPA 8270 by SIM	MSSV/7888
10186833002	W421D - 032612	EPA 3510	OEXT/18169	EPA 8270 by SIM	MSSV/7888
10186833003	W421FB - 032612	EPA 3510	OEXT/18169	EPA 8270 by SIM	MSSV/7888
10186833004	W421 - 032612	EPA 3510	OEXT/18169	EPA 8270 by SIM	MSSV/7888


CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10186835

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Summit Environmental Services	Report To:	Bill Gregg	Attention:	Bill Gregg
Address:	1217 Bardonia Blvd. N.	Copy To:	Peter Bafl	Company Name:	Summit Environmental Services
	St. Paul, MN 55108			Address:	
Email To:	bgregg@summitr.com	Purchase Order No.:		Pace Quote Reference:	00002209
Phone:	651.262.4236	Project Name:	SLP Reilly	Pace Project Manager:	Murish Perento
Requested Due Date/TAT:		Project Number:	0987-0009-400	Pace Profile #:	
REGULATORY AGENCY		REGULATORY AGENCY		REGULATORY AGENCY	
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER	
<input type="checkbox"/> UST <input type="checkbox"/> RCRA		<input type="checkbox"/> UST <input type="checkbox"/> RCRA		<input type="checkbox"/> UST <input type="checkbox"/> RCRA	
Site Location		Site Location		Site Location	
STATE:		STATE:		STATE:	
MN		MN		MN	
1544584		1544584		1544584	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				# OF CONTAINERS	Preservatives Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.			
					COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME						DATE	TIME	
1	W420-032612		WT G			3/26/12	15:38		2				001			
2	W421 D -032612		WT I				15:50		1				002			
3	W421 FB -032612		WT I				15:55		1				003			
4	W421 -032612		WT I				15:45		1				004			
5																
6																
7																
8																
9																
10																
11																
12																
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Pete Bell / Summit Env.			3/26/12		16:47		J. E. Pace		3/26/12		16:47		5:14		N/A	

	Document Name:	Revised Date: 15Feb2012
	Sample Condition Upon Receipt Form	Page 1 of 1
	Document Number:	Issuing Authority:
	F-MN-L-213-rev.02	Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name: Summit Project # 10186833

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☒ no

Optional:
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ☒ No ☐

Thermometer Used 80344042 or 88512447

Type of Ice: Wet Blue None ☐

☐ Samples on ice, cooling process has begun

Cooler Temperature 5.4

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 8/2 3/26/12

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>cut</u>		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4, HCL<2; NaOH >12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Samp #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

Manah Klemm

Date: 3/27/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

July 10, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 Reilly Site
Pace Project No.: 10196797

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Idaho Certification #: MN00064

Illinois Certification #: 200011

Iowa Certification #: 368

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New Mexico Certification #: Pace

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: D9921

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Washington Certification #: C754

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10196797001	SLP10T- 062612	Water	06/26/12 13:30	06/26/12 17:00

REPORT OF LABORATORY ANALYSIS

Page 3 of 9

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SAMPLE ANALYTE COUNT

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10196797001	SLP10T- 062612	EPA 8270 by SIM	JLR	41

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

Sample: SLP10T- 062612 **Lab ID:** 10196797001 **Collected:** 06/26/12 13:30 **Received:** 06/26/12 17:00 **Matrix:** Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV CPAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	208-96-8	
Anthracene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	50-32-8	
Benzo(e)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	192-97-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	191-24-2	
Benzo(a)fluoranthene (Total)	ND	ug/L	0.20	0.10	1	07/02/12 07:07	07/03/12 19:58		
Carbazole	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	86-74-8	
2-Chloronaphthalene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	91-58-7	
Chrysene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	218-01-9	
Dibenz(a,h)acridine	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	226-36-8	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	53-70-3	
Dibenz(a,j)acridine	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	224-42-0	
Dibenzo(a,e)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	192-65-4	
Dibenzo(a,h)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	189-64-0	
Dibenzo(a,i)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	189-55-9	
Dibenzo(a,l)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	191-30-0	
7H-Dibenzo(c,g)carbazole	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	194-59-2	
Dibenzofuran	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	132-64-9	
7,12-Dimethylbenz(a)anthracene	ND	ug/L	0.10	0.020	1	07/02/12 07:07	07/03/12 19:58	57-97-6	
1,6-Dinitropyrene	ND	ug/L	1.0	0.51	1	07/02/12 07:07	07/03/12 19:58	42397-64-8	
1,8-Dinitropyrene	ND	ug/L	1.0	0.51	1	07/02/12 07:07	07/03/12 19:58	42397-65-9	
Fluoranthene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	206-44-0	
Fluorene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	193-39-5	
3-Methylcholanthrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	56-49-5	
5-Methylchrysene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	3697-24-3	
1-Methylnaphthalene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	90-12-0	L2
2-Methylnaphthalene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	91-57-6	
Naphthalene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	91-20-3	
5-Nitroacenaphthene	ND	ug/L	0.31	0.020	1	07/02/12 07:07	07/03/12 19:58	602-57-8	
6-Nitrochrysene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	7496-02-8	
2-Nitrofluorene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	607-57-8	
1-Nitropyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	5522-43-0	
4-Nitropyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	57835-92-4	
Perylene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	198-55-0	
Phenanthrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	85-01-8	
Pyrene	ND	ug/L	0.041	0.020	1	07/02/12 07:07	07/03/12 19:58	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	83 %		64-125		1	07/02/12 07:07	07/03/12 19:58	321-60-8	
Terphenyl-d14 (S)	98 %		75-125		1	07/02/12 07:07	07/03/12 19:58	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site
Pace Project No.: 10196797

QC Batch:	OEXT/18992	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water CPAH by SIM MSSV
Associated Lab Samples:	10196797001		

METHOD BLANK:	1231822	Matrix:	Water
Associated Lab Samples:	10196797001		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,6-Dinitropyrene	ug/L	ND	1.0	07/03/12 18:48	
1,8-Dinitropyrene	ug/L	ND	1.0	07/03/12 18:48	
1-Methylnaphthalene	ug/L	ND	0.040	07/03/12 18:48	
1-Nitropyrene	ug/L	ND	0.040	07/03/12 18:48	
2-Chloronaphthalene	ug/L	ND	0.040	07/03/12 18:48	
2-Methylnaphthalene	ug/L	ND	0.040	07/03/12 18:48	
2-Nitrofluorene	ug/L	ND	0.040	07/03/12 18:48	
3-Methylcholanthrene	ug/L	ND	0.040	07/03/12 18:48	
4-Nitropyrene	ug/L	ND	0.040	07/03/12 18:48	
5-Methylchrysene	ug/L	ND	0.040	07/03/12 18:48	
5-Nitroacenaphthene	ug/L	ND	0.30	07/03/12 18:48	
6-Nitrochrysene	ug/L	ND	0.040	07/03/12 18:48	
7,12-Dimethylbenz(a)anthracene	ug/L	ND	0.10	07/03/12 18:48	
7H-Dibenzo(c,g)carbazole	ug/L	ND	0.040	07/03/12 18:48	
Acenaphthene	ug/L	ND	0.040	07/03/12 18:48	
Acenaphthylene	ug/L	ND	0.040	07/03/12 18:48	
Anthracene	ug/L	ND	0.040	07/03/12 18:48	
Benzo(a)anthracene	ug/L	ND	0.040	07/03/12 18:48	
Benzo(a)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Benzo(e)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Benzo(g,h,i)perylene	ug/L	ND	0.040	07/03/12 18:48	
Benzo(a)fluoranthene (Total)	ug/L	ND	0.20	07/03/12 18:48	
Carbazole	ug/L	ND	0.040	07/03/12 18:48	
Chrysene	ug/L	ND	0.040	07/03/12 18:48	
Dibenz(a,h)acridine	ug/L	ND	0.040	07/03/12 18:48	
Dibenz(a,h)anthracene	ug/L	ND	0.040	07/03/12 18:48	
Dibenz(a,i)acridine	ug/L	ND	0.040	07/03/12 18:48	
Dibenzo(a,e)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Dibenzo(a,h)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Dibenzo(a,i)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Dibenzo(a,l)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Dibenzofuran	ug/L	ND	0.040	07/03/12 18:48	
Fluoranthene	ug/L	ND	0.040	07/03/12 18:48	
Fluorene	ug/L	ND	0.040	07/03/12 18:48	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	07/03/12 18:48	
Naphthalene	ug/L	ND	0.040	07/03/12 18:48	
Perylene	ug/L	ND	0.040	07/03/12 18:48	
Phenanthrene	ug/L	ND	0.040	07/03/12 18:48	
Pyrene	ug/L	ND	0.040	07/03/12 18:48	
2-Fluorobiphenyl (S)	%	84	64-125	07/03/12 18:48	
Terphenyl-d14 (S)	%	106	75-125	07/03/12 18:48	

QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

LABORATORY CONTROL SAMPLE & LCSD:		1231823	1231824							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,6-Dinitropyrene	ug/L	3	2.1	2.2	71	74	30-150	4	20	
1,8-Dinitropyrene	ug/L	3	2.1	2.1	69	70	30-150	2	20	
1-Methylnaphthalene	ug/L	3	2.2	1.9	75	63	70-130	16	20	L0
1-Nitropyrene	ug/L	3	2.7	2.8	89	93	44-125	4	20	
2-Chloronaphthalene	ug/L	3	2.6	2.2	86	74	70-130	14	20	
2-Methylnaphthalene	ug/L	3	2.3	1.9	76	64	51-125	17	20	
2-Nitrofluorene	ug/L	3	2.7	2.8	90	93	70-130	4	20	
3-Methylcholanthrene	ug/L	3	2.8	2.9	95	96	33-129	.8	20	
4-Nitropyrene	ug/L	3	2.8	2.8	92	95	41-137	3	20	
5-Methylchrysene	ug/L	3	2.8	2.9	94	98	66-125	4	20	
5-Nitroacenaphthene	ug/L	3	2.6	2.6	87	88	70-130	.9	20	
6-Nitrochrysene	ug/L	3	2.8	2.9	93	95	35-141	2	20	
7,12-Dimethylbenz(a)anthracene	ug/L	3	1.3	1.1	43	37	30-150	16	20	SS
7H-Dibenzo(c,g)carbazole	ug/L	3	3.1	3.0	103	101	60-125	1	20	
Acenaphthene	ug/L	3	2.4	2.2	81	72	56-125	12	20	
Acenaphthylene	ug/L	3	2.3	2.1	78	71	50-125	10	20	
Anthracene	ug/L	3	2.5	2.5	83	82	50-125	.3	20	
Benzo(a)anthracene	ug/L	3	2.5	2.6	83	85	59-125	3	20	
Benzo(a)pyrene	ug/L	3	2.7	2.8	91	92	58-125	.9	20	
Benzo(e)pyrene	ug/L	3	2.9	2.9	96	95	57-125	.6	20	
Benzo(g,h,i)perylene	ug/L	3	2.7	2.8	91	93	56-125	2	20	
Benzo(a)fluoranthene (Total)	ug/L	9	8.4	8.4	94	94	54-125	.2	20	
Carbazole	ug/L	3	2.9	3.0	98	99	70-130	1	20	
Chrysene	ug/L	3	2.5	2.6	84	88	65-125	4	20	
Dibenz(a,h)acridine	ug/L	3	3.1	3.1	102	102	55-125	.5	20	
Dibenz(a,h)anthracene	ug/L	3	2.8	2.8	93	94	56-125	.9	20	
Dibenz(a,i)acridine	ug/L	3	2.8	2.0	95	68	46-125	33	20	D6
Dibenzo(a,e)pyrene	ug/L	3	2.8	2.7	93	92	47-125	1	20	
Dibenzo(a,h)pyrene	ug/L	3	2.9	3.0	98	99	46-125	1	20	
Dibenzo(a,i)pyrene	ug/L	3	2.9	3.0	97	99	34-125	2	20	
Dibenzo(a,l)pyrene	ug/L	3	2.8	2.9	93	96	31-125	3	20	
Dibenzofuran	ug/L	3	2.6	2.4	87	81	70-130	7	20	
Fluoranthene	ug/L	3	2.7	2.7	91	91	58-125	.5	20	
Fluorene	ug/L	3	2.6	2.5	86	82	57-125	5	20	
Indeno(1,2,3-cd)pyrene	ug/L	3	2.8	2.8	93	94	58-125	2	20	
Naphthalene	ug/L	3	2.2	1.9	74	62	52-125	17	20	
Perylene	ug/L	3	2.7	2.8	91	94	54-125	3	20	
Phenanthrene	ug/L	3	2.5	2.5	84	85	65-125	.8	20	
Pyrene	ug/L	3	2.6	2.6	85	88	66-125	3	20	
2-Fluorobiphenyl (S)	%				84	73	64-125			
Terphenyl-d14 (S)	%				101	104	75-125			

QUALIFIERS

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSSV/8255

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.

SS This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 Reilly Site

Pace Project No.: 10196797

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10196797001	SLP10T- 062612	EPA 3510	OEXT/18992	EPA 8270 by SIM	MSSV/8255


The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10196191

10196797

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[illegible]

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 19Jun2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.03	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name:

Summit

Project #:

WO#: 10196797



Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other: Foam Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☐ 80344042 ☒ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temperature: 0.0 Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents: JE 6/26/12
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>no DATE or TIME on C.O.C.</u>
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sample # _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Pace Trip Blank Lot # (if purchased): _____		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Bill Gregg

Date/Time: 6/29/12 15:17

Comments/Resolution: Sample should actually be analyzed for extended list PAHs (CPAH) instead of the standard list.

Project Manager Review:

Maurice Hunt

Date: 6/27/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

July 18, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 Reilly Site - REV
Pace Project No.: 10197327

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on June 18, 2012 to include the naphthalene and acenaphthene results that were missing from sample W439-062812.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Idaho Certification #: MN00064

Illinois Certification #: 200011

Iowa Certification #: 368

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New Mexico Certification #: Pace

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: D9921

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Washington Certification #: C754

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10197327001	P309-062812	Water	06/28/12 13:05	06/29/12 13:43
10197327002	W2-062812	Water	06/28/12 17:35	06/29/12 13:43
10197327003	W439-062812	Water	06/28/12 18:45	06/29/12 13:43
10197327004	W9-062812	Water	06/29/12 09:00	06/29/12 13:43
10197327005	W22-062812	Water	06/29/12 10:15	06/29/12 13:43
10197327006	W15-062812	Water	06/29/12 11:45	06/29/12 13:43
10197327007	W22D-062812	Water	06/29/12 10:15	06/29/12 13:43
10197327008	W22FB-062812	Water	06/29/12 10:15	06/29/12 13:43

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10197327001	P309-062812	EPA 8270 by SIM	DRE	18
10197327002	W2-062812	EPA 8270 by SIM	DRE	18
10197327003	W439-062812	EPA 8270 by SIM	DRE	18
10197327004	W9-062812	EPA 8270 by SIM	DRE	18
10197327005	W22-062812	EPA 8270 by SIM	DRE	18
10197327006	W15-062812	EPA 8270 by SIM	DRE	18
10197327007	W22D-062812	EPA 8270 by SIM	DRE	18
10197327008	W22FB-062812	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: P309-062812		Lab ID: 10197327001		Collected: 06/28/12 13:05		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	9.8	ug/L	0.042	0.0052	1	07/05/12 07:02	07/10/12 13:27	83-32-9	
Acenaphthylene	0.12	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 13:27	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 13:27	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 13:27	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 13:27	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	07/05/12 07:02	07/10/12 13:27	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 13:27	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 13:27	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 13:27	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 13:27	53-70-3	
Fluoranthene	0.082	ug/L	0.042	0.012	1	07/05/12 07:02	07/10/12 13:27	206-44-0	
Fluorene	0.45	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 13:27	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 13:27	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/05/12 07:02	07/10/12 13:27	91-20-3	
Phenanthrene	0.057	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 13:27	85-01-8	
Pyrene	0.056	ug/L	0.042	0.014	1	07/05/12 07:02	07/10/12 13:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70	%	58-125		1	07/05/12 07:02	07/10/12 13:27	321-60-8	
Terphenyl-d14 (S)	87	%	75-125		1	07/05/12 07:02	07/10/12 13:27	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W2-062812		Lab ID: 10197327002		Collected: 06/28/12 17:35		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	07/05/12 07:02	07/10/12 13:47	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 13:47	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	07/05/12 07:02	07/10/12 13:47	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	07/05/12 07:02	07/10/12 13:47	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	07/05/12 07:02	07/10/12 13:47	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.11	0.011	1	07/05/12 07:02	07/10/12 13:47	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	07/05/12 07:02	07/10/12 13:47	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	07/05/12 07:02	07/10/12 13:47	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	07/05/12 07:02	07/10/12 13:47	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	07/05/12 07:02	07/10/12 13:47	53-70-3	
Fluoranthene	0.052	ug/L	0.042	0.013	1	07/05/12 07:02	07/10/12 13:47	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 13:47	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	07/05/12 07:02	07/10/12 13:47	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/05/12 07:02	07/10/12 13:47	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	07/05/12 07:02	07/10/12 13:47	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	07/05/12 07:02	07/10/12 13:47	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73 %		58-125		1	07/05/12 07:02	07/10/12 13:47	321-60-8	
Terphenyl-d14 (S)	90 %		75-125		1	07/05/12 07:02	07/10/12 13:47	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W439-062812		Lab ID: 10197327003		Collected: 06/28/12 18:45		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	66.7	ug/L	10.4	1.3	250	07/05/12 07:02	07/12/12 16:13	83-32-9	
Acenaphthylene	0.72	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 14:07	208-96-8	
Anthracene	0.50	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 14:07	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 14:07	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 14:07	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	07/05/12 07:02	07/10/12 14:07	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 14:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 14:07	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 14:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	07/05/12 07:02	07/10/12 14:07	53-70-3	
Fluoranthene	0.15	ug/L	0.042	0.012	1	07/05/12 07:02	07/10/12 14:07	206-44-0	
Fluorene	9.1	ug/L	0.042	0.0042	1	07/05/12 07:02	07/10/12 14:07	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	07/05/12 07:02	07/10/12 14:07	193-39-5	
Naphthalene	663	ug/L	10.4	1.6	250	07/05/12 07:02	07/12/12 16:13	91-20-3	
Phenanthrene	6.6	ug/L	0.042	0.0083	1	07/05/12 07:02	07/10/12 14:07	85-01-8	
Pyrene	0.076	ug/L	0.042	0.014	1	07/05/12 07:02	07/10/12 14:07	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	58-125		1	07/05/12 07:02	07/10/12 14:07	321-60-8	
Terphenyl-d14 (S)	85	%	75-125		1	07/05/12 07:02	07/10/12 14:07	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W9-062812		Lab ID: 10197327004		Collected: 06/29/12 09:00		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.24	ug/L	0.043	0.0053	1	07/06/12 07:02	07/13/12 13:26	83-32-9	
Acenaphthylene	ND	ug/L	0.043	0.0043	1	07/06/12 07:02	07/13/12 13:26	208-96-8	
Anthracene	ND	ug/L	0.043	0.0085	1	07/06/12 07:02	07/13/12 13:26	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0085	1	07/06/12 07:02	07/13/12 13:26	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	07/06/12 07:02	07/13/12 13:26	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	07/06/12 07:02	07/13/12 13:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	07/06/12 07:02	07/13/12 13:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0096	1	07/06/12 07:02	07/13/12 13:26	207-08-9	
Chrysene	ND	ug/L	0.043	0.0096	1	07/06/12 07:02	07/13/12 13:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0096	1	07/06/12 07:02	07/13/12 13:26	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	07/06/12 07:02	07/13/12 13:26	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	07/06/12 07:02	07/13/12 13:26	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	07/06/12 07:02	07/13/12 13:26	193-39-5	
Naphthalene	0.14	ug/L	0.043	0.0064	1	07/06/12 07:02	07/13/12 13:26	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0085	1	07/06/12 07:02	07/13/12 13:26	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	07/06/12 07:02	07/13/12 13:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70 %		58-125		1	07/06/12 07:02	07/13/12 13:26	321-60-8	
Terphenyl-d14 (S)	63 %		75-125		1	07/06/12 07:02	07/13/12 13:26	1718-51-0	1M

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W22-062812		Lab ID: 10197327005		Collected: 06/29/12 10:15		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.12	ug/L	0.042	0.0053	1	07/06/12 07:02	07/13/12 13:47	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 13:47	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 13:47	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 13:47	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 13:47	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 13:47	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 13:47	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 13:47	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 13:47	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 13:47	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	07/06/12 07:02	07/13/12 13:47	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 13:47	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 13:47	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/06/12 07:02	07/13/12 13:47	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 13:47	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	07/06/12 07:02	07/13/12 13:47	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78	%	58-125		1	07/06/12 07:02	07/13/12 13:47	321-60-8	
Terphenyl-d14 (S)	87	%	75-125		1	07/06/12 07:02	07/13/12 13:47	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W15-062812		Lab ID: 10197327006		Collected: 06/29/12 11:45		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	07/06/12 07:02	07/13/12 14:09	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:09	208-96-8	
Anthracene	0.068	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:09	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:09	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:09	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:09	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:09	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:09	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:09	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:09	53-70-3	
Fluoranthene	0.044	ug/L	0.042	0.012	1	07/06/12 07:02	07/13/12 14:09	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:09	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:09	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/06/12 07:02	07/13/12 14:09	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:09	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	07/06/12 07:02	07/13/12 14:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	07/06/12 07:02	07/13/12 14:09	321-60-8	
Terphenyl-d14 (S)	83 %		75-125		1	07/06/12 07:02	07/13/12 14:09	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W22D-062812		Lab ID: 10197327007		Collected: 06/29/12 10:15		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.14	ug/L	0.042	0.0052	1	07/06/12 07:02	07/13/12 14:30	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:30	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:30	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:30	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:30	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	07/06/12 07:02	07/13/12 14:30	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	07/06/12 07:02	07/13/12 14:30	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	07/06/12 07:02	07/13/12 14:30	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/06/12 07:02	07/13/12 14:30	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	07/06/12 07:02	07/13/12 14:30	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	07/06/12 07:02	07/13/12 14:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76	%	58-125		1	07/06/12 07:02	07/13/12 14:30	321-60-8	
Terphenyl-d14 (S)	87	%	75-125		1	07/06/12 07:02	07/13/12 14:30	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Sample: W22FB-062812		Lab ID: 10197327008		Collected: 06/29/12 10:15		Received: 06/29/12 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	07/06/12 07:02	07/13/12 14:52	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:52	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 14:52	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 14:52	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 14:52	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 14:52	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 14:52	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 14:52	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 14:52	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	07/06/12 07:02	07/13/12 14:52	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	07/06/12 07:02	07/13/12 14:52	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	07/06/12 07:02	07/13/12 14:52	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	07/06/12 07:02	07/13/12 14:52	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	07/06/12 07:02	07/13/12 14:52	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	07/06/12 07:02	07/13/12 14:52	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	07/06/12 07:02	07/13/12 14:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72 %		58-125		1	07/06/12 07:02	07/13/12 14:52	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	07/06/12 07:02	07/13/12 14:52	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

QC Batch: OEXT/19020

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270 Water PAH by SIM MSSV

Associated Lab Samples: 10197327001, 10197327002, 10197327003

METHOD BLANK: 1233874

Matrix: Water

Associated Lab Samples: 10197327001, 10197327002, 10197327003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	07/10/12 11:46	
Acenaphthylene	ug/L	ND	0.040	07/10/12 11:46	
Anthracene	ug/L	ND	0.040	07/10/12 11:46	
Benzo(a)anthracene	ug/L	ND	0.040	07/10/12 11:46	
Benzo(a)pyrene	ug/L	ND	0.040	07/10/12 11:46	
Benzo(b)fluoranthene	ug/L	ND	0.10	07/10/12 11:46	
Benzo(g,h,i)perylene	ug/L	ND	0.040	07/10/12 11:46	
Benzo(k)fluoranthene	ug/L	ND	0.040	07/10/12 11:46	
Chrysene	ug/L	ND	0.040	07/10/12 11:46	
Dibenz(a,h)anthracene	ug/L	ND	0.040	07/10/12 11:46	
Fluoranthene	ug/L	ND	0.040	07/10/12 11:46	
Fluorene	ug/L	ND	0.040	07/10/12 11:46	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	07/10/12 11:46	
Naphthalene	ug/L	ND	0.040	07/10/12 11:46	
Phenanthrene	ug/L	ND	0.040	07/10/12 11:46	
Pyrene	ug/L	ND	0.040	07/10/12 11:46	
2-Fluorobiphenyl (S)	%	72	58-125	07/10/12 11:46	
Terphenyl-d14 (S)	%	83	75-125	07/10/12 11:46	

LABORATORY CONTROL SAMPLE & LCSD: 1233875

1233876

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acenaphthene	ug/L	1	0.73	0.83	73	83	56-125	13	20	
Acenaphthylene	ug/L	1	0.70	0.81	70	81	55-125	14	20	
Anthracene	ug/L	1	0.81	0.92	81	92	63-125	13	20	
Benzo(a)anthracene	ug/L	1	0.81	0.90	81	90	61-125	10	20	
Benzo(a)pyrene	ug/L	1	0.90	1.0	90	101	67-125	11	20	
Benzo(b)fluoranthene	ug/L	1	0.88	0.99	88	99	64-125	12	20	
Benzo(g,h,i)perylene	ug/L	1	0.88	0.98	88	98	68-125	10	20	
Benzo(k)fluoranthene	ug/L	1	0.89	0.98	89	98	60-125	10	20	
Chrysene	ug/L	1	0.83	0.91	83	91	67-125	9	20	
Dibenz(a,h)anthracene	ug/L	1	0.90	0.96	90	96	60-125	6	20	
Fluoranthene	ug/L	1	0.86	0.94	86	94	64-125	10	20	
Fluorene	ug/L	1	0.74	0.84	74	84	62-125	13	20	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.90	0.99	90	99	67-125	10	20	
Naphthalene	ug/L	1	0.66	0.74	66	74	53-125	11	20	
Phenanthrene	ug/L	1	0.82	0.92	82	92	64-125	11	20	
Pyrene	ug/L	1	0.84	0.94	84	94	64-125	11	20	
2-Fluorobiphenyl (S)	%				63	72	58-125			
Terphenyl-d14 (S)	%				83	91	75-125			

Date: 07/18/2012 12:48 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

QC Batch: OEXT/19034 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 10197327004, 10197327005, 10197327006, 10197327007, 10197327008

METHOD BLANK: 1234520 Matrix: Water

Associated Lab Samples: 10197327004, 10197327005, 10197327006, 10197327007, 10197327008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	07/13/12 12:07	
Acenaphthylene	ug/L	ND	0.040	07/13/12 12:07	
Anthracene	ug/L	ND	0.040	07/13/12 12:07	
Benzo(a)anthracene	ug/L	ND	0.040	07/13/12 12:07	
Benzo(a)pyrene	ug/L	ND	0.040	07/13/12 12:07	
Benzo(b)fluoranthene	ug/L	ND	0.040	07/13/12 12:07	
Benzo(g,h,i)perylene	ug/L	ND	0.040	07/13/12 12:07	
Benzo(k)fluoranthene	ug/L	ND	0.040	07/13/12 12:07	
Chrysene	ug/L	ND	0.040	07/13/12 12:07	
Dibenz(a,h)anthracene	ug/L	ND	0.040	07/13/12 12:07	
Fluoranthene	ug/L	ND	0.040	07/13/12 12:07	
Fluorene	ug/L	ND	0.040	07/13/12 12:07	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	07/13/12 12:07	
Naphthalene	ug/L	ND	0.040	07/13/12 12:07	
Phenanthrene	ug/L	ND	0.040	07/13/12 12:07	
Pyrene	ug/L	ND	0.040	07/13/12 12:07	
2-Fluorobiphenyl (S)	%	78	58-125	07/13/12 12:07	
Terphenyl-d14 (S)	%	93	75-125	07/13/12 12:07	

LABORATORY CONTROL SAMPLE: 1234521

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.76	76	56-125	
Acenaphthylene	ug/L	1	0.73	73	55-125	
Anthracene	ug/L	1	0.81	81	63-125	
Benzo(a)anthracene	ug/L	1	0.84	84	61-125	
Benzo(a)pyrene	ug/L	1	0.90	90	67-125	
Benzo(b)fluoranthene	ug/L	1	0.86	86	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.84	84	68-125	
Benzo(k)fluoranthene	ug/L	1	0.83	83	60-125	
Chrysene	ug/L	1	0.80	80	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.85	85	60-125	
Fluoranthene	ug/L	1	0.96	96	64-125	
Fluorene	ug/L	1	0.82	82	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.85	85	67-125	
Naphthalene	ug/L	1	0.74	74	53-125	
Phenanthrene	ug/L	1	0.84	84	64-125	
Pyrene	ug/L	1	0.84	84	64-125	
2-Fluorobiphenyl (S)	%			75	58-125	
Terphenyl-d14 (S)	%			85	75-125	

Date: 07/18/2012 12:48 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1234522 1234523											
Parameter	Units	10197621004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.73	0.76	70	74	55-125	5	30
Acenaphthylene	ug/L	ND	1	1	0.70	0.74	68	71	55-125	5	30
Anthracene	ug/L	ND	1	1	0.76	0.82	74	80	60-125	7	30
Benzo(a)anthracene	ug/L	ND	1	1	0.78	0.85	75	82	55-125	9	30
Benzo(a)pyrene	ug/L	ND	1	1	0.82	0.91	80	88	61-125	10	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.82	0.85	79	82	58-125	3	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.77	0.83	75	81	63-125	8	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.77	0.88	75	86	55-125	14	30
Chrysene	ug/L	ND	1	1	0.72	0.76	69	74	61-125	6	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.78	0.85	76	82	60-125	8	30
Fluoranthene	ug/L	ND	1	1	0.86	0.94	83	92	68-125	9	30
Fluorene	ug/L	ND	1	1	0.76	0.81	74	79	60-125	7	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.77	0.85	75	82	59-125	9	30
Naphthalene	ug/L	ND	1	1	0.71	0.71	69	69	50-125	.1	30
Phenanthrene	ug/L	ND	1	1	0.74	0.81	72	79	63-125	10	30
Pyrene	ug/L	ND	1	1	0.78	0.83	76	81	57-125	6	30
2-Fluorobiphenyl (S)	%						70	73	58-125		
Terphenyl-d14 (S)	%						78	82	75-125		

QUALIFIERS

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSSV/8275

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M Surrogate recovery outside laboratory control limits, possibly due to sample emulsion in prep (confirmed by re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 Reilly Site - REV

Pace Project No.: 10197327

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10197327001	P309-062812	EPA 3510	OEXT/19020	EPA 8270 by SIM	MSSV/8275
10197327002	W2-062812	EPA 3510	OEXT/19020	EPA 8270 by SIM	MSSV/8275
10197327003	W439-062812	EPA 3510	OEXT/19020	EPA 8270 by SIM	MSSV/8275
10197327004	W9-062812	EPA 3510	OEXT/19034	EPA 8270 by SIM	MSSV/8295
10197327005	W22-062812	EPA 3510	OEXT/19034	EPA 8270 by SIM	MSSV/8295
10197327006	W15-062812	EPA 3510	OEXT/19034	EPA 8270 by SIM	MSSV/8295
10197327007	W22D-062812	EPA 3510	OEXT/19034	EPA 8270 by SIM	MSSV/8295
10197327008	W22FB-062812	EPA 3510	OEXT/19034	EPA 8270 by SIM	MSSV/8295

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: <u>Summit Environmental</u> Address: <u>1217 Barbara Blvd N</u> <u>St. Paul, MN 55108</u> Email To: _____ Phone: _____ Fax: _____ Requested Due Date/TAT: _____		Section B Required Project Information: Report To: <u>Bill Gregory</u> Copy To: _____ Purchase Order No.: <u>0987-0009</u> Project Name: <u>Polly Site</u> Project Number: <u>0987-0009</u>		Section C Invoice Information: Attention: _____ Company Name: _____ Address: _____ Pace Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: _____	
Page: <u>1</u> of <u>1</u> 10197327		1450439			
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		Site Location STATE: _____			

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE DW Water WT Waste Water Product P Soil/Solid OL Oil Wipe Air TS Tissue OT Other	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MATRIX CODE	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Temp in °C	Received on	Custody	Sealed Cooler	Samples Intact
			COMPOSITE START	COMPOSITE END/GRAB														
1	P309-062812																	
2	W2 -062812																	
3	W439-062812																	
4	W9 -062812																	
5	W22-062812																	
6	W15-062812																	
7	W22D-062812																	
8	W22 FB-062812																	
9																		
10																		
11																		
12																		
ADDITIONAL COMMENTS: <u>Summit / Summit</u>																		
DATE: <u>6/28/12</u> TIME: <u>19:30</u> AFFILIATION: <u>TN/Pace</u>																		
DATE: <u>6/29/12</u> TIME: <u>13:13</u> AFFILIATION: <u>13.8</u>																		
DATE: <u>6/29/12</u> TIME: <u>15:11</u> AFFILIATION: <u>15.1</u>																		
DATE: <u>6/29/12</u> TIME: <u>8:7</u> AFFILIATION: <u>8.7</u>																		

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <u>Peter Bell</u> SIGNATURE of SAMPLER: <u>[Signature]</u>		DATE Signed (MM/DD/YYYY): <u>06/28/12</u>
---	--	---

ORIGINAL



Document Name:
Sample Condition Upon Receipt Form
Document No.:
F-MN-L-213-rev.03

Document Revised: 19Jun2012
Page 1 of 1
Issuing Authority:
Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

Summit environmental solutions

WO#: **10197327**



10197327

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☐ 80344042 ☒ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 13.8, 15.1, 8.2 Biological Tissue Frozen? ☐ Yes ☒ No Date and Initials of Person Examining Contents: CSL 6-29-12
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Bill Gregg

Date/Time: 7/2/12 10:20

Comments/Resolution: Analyze for standard list PAHs and okay to proceed out of temp.

Project Manager Review:

Mona K. Rumb

Date: 7/2/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 19, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/REILLY -REV
Pace Project No.: 10205640

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised on October 19, 2012 to remove sample 0987-09 W410 because volume provided for the field blank was analyzed instead of the actual sample.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10205640001	0987-09 W129	Water	09/17/12 10:40	09/17/12 17:14
10205640002	0987-09 W122	Water	09/17/12 14:30	09/17/12 17:14

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10205640001	0987-09 W129	EPA 8270 by SIM	DRE	18
10205640002	0987-09 W122	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Date: October 19, 2012

Case Narrative:

The samples were prepared in batch 19742. The provided field blank volume was accidentally selected as the parent sample used for the batch Matrix Spike/Matrix Spike duplicate. This was discovered after holding time expired so the analysis was canceled and the data was reported.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Sample: 0987-09 W129		Lab ID: 10205640001		Collected: 09/17/12 10:40		Received: 09/17/12 17:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	09/19/12 11:11	09/25/12 18:06	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	09/19/12 11:11	09/25/12 18:06	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	09/19/12 11:11	09/25/12 18:06	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	09/19/12 11:11	09/25/12 18:06	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	09/19/12 11:11	09/25/12 18:06	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	09/19/12 11:11	09/25/12 18:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	09/19/12 11:11	09/25/12 18:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	09/19/12 11:11	09/25/12 18:06	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	09/19/12 11:11	09/25/12 18:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	09/19/12 11:11	09/25/12 18:06	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	09/19/12 11:11	09/25/12 18:06	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	09/19/12 11:11	09/25/12 18:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	09/19/12 11:11	09/25/12 18:06	193-39-5	
Naphthalene	0.16	ug/L	0.042	0.0063	1	09/19/12 11:11	09/25/12 18:06	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	09/19/12 11:11	09/25/12 18:06	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	09/19/12 11:11	09/25/12 18:06	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	96 %		58-125		1	09/19/12 11:11	09/25/12 18:06	321-60-8	
Terphenyl-d14 (S)	98 %		75-125		1	09/19/12 11:11	09/25/12 18:06	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Sample: 0987-09 W122		Lab ID: 10205640002		Collected: 09/17/12 14:30		Received: 09/17/12 17:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	09/19/12 11:11	09/25/12 18:28	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	09/19/12 11:11	09/25/12 18:28	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	09/19/12 11:11	09/25/12 18:28	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	09/19/12 11:11	09/25/12 18:28	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	09/19/12 11:11	09/25/12 18:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	09/19/12 11:11	09/25/12 18:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	09/19/12 11:11	09/25/12 18:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	09/19/12 11:11	09/25/12 18:28	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	09/19/12 11:11	09/25/12 18:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	09/19/12 11:11	09/25/12 18:28	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	09/19/12 11:11	09/25/12 18:28	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	09/19/12 11:11	09/25/12 18:28	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	09/19/12 11:11	09/25/12 18:28	193-39-5	
Naphthalene	0.048	ug/L	0.042	0.0063	1	09/19/12 11:11	09/25/12 18:28	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	09/19/12 11:11	09/25/12 18:28	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	09/19/12 11:11	09/25/12 18:28	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	100 %		58-125		1	09/19/12 11:11	09/25/12 18:28	321-60-8	
Terphenyl-d14 (S)	101 %		75-125		1	09/19/12 11:11	09/25/12 18:28	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

QC Batch: OEXT/19742

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270 Water PAH by SIM MSSV

Associated Lab Samples: 10205640001, 10205640002

METHOD BLANK: 1291148

Matrix: Water

Associated Lab Samples: 10205640001, 10205640002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	09/25/12 17:02	
Acenaphthylene	ug/L	ND	0.040	09/25/12 17:02	
Anthracene	ug/L	ND	0.040	09/25/12 17:02	
Benzo(a)anthracene	ug/L	ND	0.040	09/25/12 17:02	
Benzo(a)pyrene	ug/L	ND	0.040	09/25/12 17:02	
Benzo(b)fluoranthene	ug/L	ND	0.040	09/25/12 17:02	
Benzo(g,h,i)perylene	ug/L	ND	0.040	09/25/12 17:02	
Benzo(k)fluoranthene	ug/L	ND	0.040	09/25/12 17:02	
Chrysene	ug/L	ND	0.040	09/25/12 17:02	
Dibenz(a,h)anthracene	ug/L	ND	0.040	09/25/12 17:02	
Fluoranthene	ug/L	ND	0.040	09/25/12 17:02	
Fluorene	ug/L	ND	0.040	09/25/12 17:02	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	09/25/12 17:02	
Naphthalene	ug/L	ND	0.040	09/25/12 17:02	
Phenanthrene	ug/L	ND	0.040	09/25/12 17:02	
Pyrene	ug/L	ND	0.040	09/25/12 17:02	
2-Fluorobiphenyl (S)	%	102	58-125	09/25/12 17:02	
Terphenyl-d14 (S)	%	104	75-125	09/25/12 17:02	

LABORATORY CONTROL SAMPLE: 1291149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.84	84	56-125	
Acenaphthylene	ug/L	1	0.81	81	55-125	
Anthracene	ug/L	1	0.85	85	63-125	
Benzo(a)anthracene	ug/L	1	0.83	83	61-125	
Benzo(a)pyrene	ug/L	1	0.91	91	67-125	
Benzo(b)fluoranthene	ug/L	1	0.88	88	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.86	86	68-125	
Benzo(k)fluoranthene	ug/L	1	0.85	85	60-125	
Chrysene	ug/L	1	0.81	81	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.89	89	60-125	
Fluoranthene	ug/L	1	0.79	79	64-125	
Fluorene	ug/L	1	0.77	77	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.89	89	67-125	
Naphthalene	ug/L	1	0.80	80	53-125	
Phenanthrene	ug/L	1	0.88	88	64-125	
Pyrene	ug/L	1	0.88	88	64-125	
2-Fluorobiphenyl (S)	%			101	58-125	
Terphenyl-d14 (S)	%			100	75-125	

Date: 10/19/2012 03:28 PM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: 0987-0009 SLP/REILLY -REV

Pace Project No.: 10205640

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10205640001	0987-09 W129	EPA 3510	OEXT/19742	EPA 8270 by SIM	MSSV/8602
10205640002	0987-09 W122	EPA 3510	OEXT/19742	EPA 8270 by SIM	MSSV/8602

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Summit Environments	Report To: Bill Gregg	Attention: Kevin McLarnon	Company Name: Summit Environments	REGULATORY AGENCY	1496144
Address: 1217 Bardana Blvd N.	Copy To:	Address: 1217 Bardana Blvd.		NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/>	
Saint Paul, MN 55108				UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Email To: bgregg@summit.com	Purchase Order No.: 0987-0009	Pace Quote Reference:			
Phone: 651-262-4236	Project Name: SP/Reilly Site	Pace Project Manager:		Site Location	W1
Requested Due Date/TAT: 0987-0009	Project Number: 0987-0009	Pace Profile #:		STATE:	

[illegible]

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

Summit

Envirolutions

WO#: 10205640



10205640

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No

Seals Intact? ☐ Yes ☒ No

Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____

Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☐ 888A912167504 ☒ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temperature: *0.1+1.0* Biological Tissue Frozen? ☐ Yes ☒ No Date and Initials of Person Examining Contents: *JR 9/17/12*
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <i>WT</i>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>22)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review:

Navin K. Puri

Date: *9/19/12*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 11, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly Site
Pace Project No.: 10207361

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2012.

The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10207361001	0987-09 W410	Water	10/02/12 13:00	10/02/12 14:28
10207361002	0987-09 W410 D	Water	10/02/12 13:00	10/02/12 14:28
10207361003	0987-09 W410 FB	Water	10/02/12 13:00	10/02/12 14:28

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10207361001	0987-09 W410	EPA 8270 by SIM	WJH	18
10207361002	0987-09 W410 D	EPA 8270 by SIM	WJH	18
10207361003	0987-09 W410 FB	EPA 8270 by SIM	WJH	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Sample: 0987-09 W410		Lab ID: 10207361001	Collected: 10/02/12 13:00	Received: 10/02/12 14:28	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	9.3	ug/L	0.042	0.0053	1	10/04/12 07:03	10/08/12 18:50	83-32-9	M1
Acenaphthylene	0.71	ug/L	0.042	0.0042	1	10/04/12 07:03	10/08/12 18:50	208-96-8	L2
Anthracene	0.23	ug/L	0.042	0.0084	1	10/04/12 07:03	10/08/12 18:50	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/04/12 07:03	10/08/12 18:50	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/04/12 07:03	10/08/12 18:50	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/04/12 07:03	10/08/12 18:50	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/04/12 07:03	10/08/12 18:50	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/04/12 07:03	10/08/12 18:50	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/04/12 07:03	10/08/12 18:50	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/04/12 07:03	10/08/12 18:50	53-70-3	
Fluoranthene	0.30	ug/L	0.042	0.013	1	10/04/12 07:03	10/08/12 18:50	206-44-0	
Fluorene	4.4	ug/L	0.042	0.0042	1	10/04/12 07:03	10/08/12 18:50	86-73-7	M1
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/04/12 07:03	10/08/12 18:50	193-39-5	
Naphthalene	10.3	ug/L	0.042	0.0063	1	10/04/12 07:03	10/08/12 18:50	91-20-3	M1
Phenanthrene	4.4	ug/L	0.042	0.0084	1	10/04/12 07:03	10/08/12 18:50	85-01-8	M1
Pyrene	0.15	ug/L	0.042	0.014	1	10/04/12 07:03	10/08/12 18:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70	%	58-125		1	10/04/12 07:03	10/08/12 18:50	321-60-8	
Terphenyl-d14 (S)	89	%	75-125		1	10/04/12 07:03	10/08/12 18:50	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Sample: 0987-09 W410 D		Lab ID: 10207361002		Collected: 10/02/12 13:00		Received: 10/02/12 14:28		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	10.1	ug/L	0.043	0.0053	1	10/04/12 07:03	10/08/12 19:52	83-32-9	L2
Acenaphthylene	0.81	ug/L	0.043	0.0043	1	10/04/12 07:03	10/08/12 19:52	208-96-8	
Anthracene	0.22	ug/L	0.043	0.0085	1	10/04/12 07:03	10/08/12 19:52	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0085	1	10/04/12 07:03	10/08/12 19:52	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	10/04/12 07:03	10/08/12 19:52	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	10/04/12 07:03	10/08/12 19:52	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	10/04/12 07:03	10/08/12 19:52	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0096	1	10/04/12 07:03	10/08/12 19:52	207-08-9	
Chrysene	ND	ug/L	0.043	0.0096	1	10/04/12 07:03	10/08/12 19:52	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0096	1	10/04/12 07:03	10/08/12 19:52	53-70-3	
Fluoranthene	0.33	ug/L	0.043	0.013	1	10/04/12 07:03	10/08/12 19:52	206-44-0	
Fluorene	4.8	ug/L	0.043	0.0043	1	10/04/12 07:03	10/08/12 19:52	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	10/04/12 07:03	10/08/12 19:52	193-39-5	
Naphthalene	11.7	ug/L	0.085	0.013	2	10/04/12 07:03	10/08/12 21:15	91-20-3	
Phenanthrene	4.6	ug/L	0.043	0.0085	1	10/04/12 07:03	10/08/12 19:52	85-01-8	
Pyrene	0.16	ug/L	0.043	0.014	1	10/04/12 07:03	10/08/12 19:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78	%	58-125		1	10/04/12 07:03	10/08/12 19:52	321-60-8	
Terphenyl-d14 (S)	95	%	75-125		1	10/04/12 07:03	10/08/12 19:52	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Sample: 0987-09 W410 FB		Lab ID: 10207361003		Collected: 10/02/12 13:00		Received: 10/02/12 14:28		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	10/04/12 07:03	10/08/12 20:13	83-32-9	L2
Acenaphthylene	ND	ug/L	0.041	0.0041	1	10/04/12 07:03	10/08/12 20:13	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	10/04/12 07:03	10/08/12 20:13	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/04/12 07:03	10/08/12 20:13	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/04/12 07:03	10/08/12 20:13	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/04/12 07:03	10/08/12 20:13	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/04/12 07:03	10/08/12 20:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	10/04/12 07:03	10/08/12 20:13	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	10/04/12 07:03	10/08/12 20:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	10/04/12 07:03	10/08/12 20:13	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	10/04/12 07:03	10/08/12 20:13	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	10/04/12 07:03	10/08/12 20:13	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/04/12 07:03	10/08/12 20:13	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	10/04/12 07:03	10/08/12 20:13	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	10/04/12 07:03	10/08/12 20:13	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	10/04/12 07:03	10/08/12 20:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	58-125		1	10/04/12 07:03	10/08/12 20:13	321-60-8	
Terphenyl-d14 (S)	96	%	75-125		1	10/04/12 07:03	10/08/12 20:13	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site
Pace Project No.: 10207361

QC Batch: OEXT/19876 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 10207361001, 10207361002, 10207361003

METHOD BLANK: 1302051 Matrix: Water
Associated Lab Samples: 10207361001, 10207361002, 10207361003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	10/08/12 13:39	
Acenaphthylene	ug/L	ND	0.040	10/08/12 13:39	
Anthracene	ug/L	ND	0.040	10/08/12 13:39	
Benzo(a)anthracene	ug/L	ND	0.040	10/08/12 13:39	
Benzo(a)pyrene	ug/L	ND	0.040	10/08/12 13:39	
Benzo(b)fluoranthene	ug/L	ND	0.040	10/08/12 13:39	
Benzo(g,h,i)perylene	ug/L	ND	0.040	10/08/12 13:39	
Benzo(k)fluoranthene	ug/L	ND	0.040	10/08/12 13:39	
Chrysene	ug/L	ND	0.040	10/08/12 13:39	
Dibenz(a,h)anthracene	ug/L	ND	0.040	10/08/12 13:39	
Fluoranthene	ug/L	ND	0.040	10/08/12 13:39	
Fluorene	ug/L	ND	0.040	10/08/12 13:39	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	10/08/12 13:39	
Naphthalene	ug/L	ND	0.040	10/08/12 13:39	
Phenanthrene	ug/L	ND	0.040	10/08/12 13:39	
Pyrene	ug/L	ND	0.040	10/08/12 13:39	
2-Fluorobiphenyl (S)	%	72	58-125	10/08/12 13:39	
Terphenyl-d14 (S)	%	89	75-125	10/08/12 13:39	

LABORATORY CONTROL SAMPLE: 1302052

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.69	69	56-125	
Acenaphthylene	ug/L	1	0.54	54	55-125	L0
Anthracene	ug/L	1	0.64	64	63-125	
Benzo(a)anthracene	ug/L	1	0.62	62	61-125	
Benzo(a)pyrene	ug/L	1	0.74	74	67-125	
Benzo(b)fluoranthene	ug/L	1	0.82	82	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.74	74	68-125	
Benzo(k)fluoranthene	ug/L	1	0.74	74	60-125	
Chrysene	ug/L	1	0.76	76	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.76	76	60-125	
Fluoranthene	ug/L	1	0.71	71	64-125	
Fluorene	ug/L	1	0.71	71	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.74	74	67-125	
Naphthalene	ug/L	1	0.67	67	53-125	
Phenanthrene	ug/L	1	0.75	75	64-125	
Pyrene	ug/L	1	0.75	75	64-125	
2-Fluorobiphenyl (S)	%			78	58-125	C0
Terphenyl-d14 (S)	%			86	75-125	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1302053 1302054											
Parameter	Units	10207361001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	9.3	1	1.1	10.9	10.2	157	86	55-125	7	E,M1
Acenaphthylene	ug/L	0.71	1	1.1	1.5	1.4	77	66	55-125	7	30
Anthracene	ug/L	0.23	1	1.1	1.1	0.91	84	64	60-125	20	30
Benzo(a)anthracene	ug/L	ND	1	1.1	0.82	0.68	78	64	55-125	19	30
Benzo(a)pyrene	ug/L	ND	1	1.1	0.93	0.76	89	72	61-125	20	30
Benzo(b)fluoranthene	ug/L	ND	1	1.1	1.0	0.77	96	73	58-125	26	30
Benzo(g,h,i)perylene	ug/L	ND	1	1.1	0.88	0.73	85	69	63-125	19	30
Benzo(k)fluoranthene	ug/L	ND	1	1.1	0.89	0.76	86	72	55-125	16	30
Chrysene	ug/L	ND	1	1.1	0.88	0.73	84	69	61-125	18	30
Dibenz(a,h)anthracene	ug/L	ND	1	1.1	0.90	0.75	87	71	60-125	19	30
Fluoranthene	ug/L	0.30	1	1.1	1.3	1.0	93	69	68-125	21	30
Fluorene	ug/L	4.4	1	1.1	5.7	5.0	125	52	60-125	14	30 M1
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1.1	0.90	0.73	87	70	59-125	20	30
Naphthalene	ug/L	10.3	1	1.1	11.9	11.1	151	76	50-125	7	30 E,M1
Phenanthrene	ug/L	4.4	1	1.1	5.8	4.9	130	43	63-125	17	30 M1
Pyrene	ug/L	0.15	1	1.1	1.1	0.91	92	72	57-125	20	30
2-Fluorobiphenyl (S)	%						74	71	58-125		
Terphenyl-d14 (S)	%						94	78	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C0 Result confirmed by second analysis.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10207361

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10207361001	0987-09 W410	EPA 3510	OEXT/19876	EPA 8270 by SIM	MSSV/8648
10207361002	0987-09 W410 D	EPA 3510	OEXT/19876	EPA 8270 by SIM	MSSV/8648
10207361003	0987-09 W410 FB	EPA 3510	OEXT/19876	EPA 8270 by SIM	MSSV/8648

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company: Summit Envirosolutions
Address: 1217 Bandana Blvd. N
City: St. Paul, MN 55108
Phone: 651-262-4236
Email To: baregg@summit.com
Requested Due Date/TAT: STD

Report To: Bill Gregg
Copy To:
Purchase Order No.: 0987-0009
Project Name: SLPR/Reilly Site
Project Number: 0987-0009

Attention: Kevin McClamon
Company Name: Summit Envirosolutions
Address: Same
Purchase Order Reference: Same
Project Manager: Mariah Peronto
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA

Site Location
STATE: _____

Section B Required Project Information:

Matrix Code: DW, WT, WW, P, SL, OL, WP, AR, OT, TS
Valid Matrix Codes: DRINKING WATER, WASTE WATER, PRODUCT, SOILSOLID, OIL, WIFE, AIR, OTHER, TISSUE

Matrix Code: WT, WT, WT
Sample Type: G, G, G
Sample Temp at Collection: 1300, 1300, 1300

Matrix Code: WT, WT, WT
Sample Type: G, G, G
Sample Temp at Collection: 1300, 1300, 1300

Section C Invoice Information:

Company Name: Summit Envirosolutions
Address: Same
Purchase Order Reference: Same
Project Manager: Mariah Peronto
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA

Site Location
STATE: _____

Section D Required Client Information:

Matrix Code: DW, WT, WW, P, SL, OL, WP, AR, OT, TS
Valid Matrix Codes: DRINKING WATER, WASTE WATER, PRODUCT, SOILSOLID, OIL, WIFE, AIR, OTHER, TISSUE

Matrix Code: WT, WT, WT
Sample Type: G, G, G
Sample Temp at Collection: 1300, 1300, 1300

Matrix Code: WT, WT, WT
Sample Type: G, G, G
Sample Temp at Collection: 1300, 1300, 1300

ITEM #	Valid Matrix Codes	Matrix Code	Sample Type	Sample Temp at Collection	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
1	0987-09 W410 *	WT	G	10/2/12 1300	Unpreserved	X			
2	0987-09 W410 D	WT	G	10/2/12 1300	Unpreserved	X			
3	0987-09 W410 FB	WT	G	10/2/12 1300	Unpreserved	X			
4									
5									
6									
7									
8									
9									
10									
11									
12									


ADDITIONAL COMMENTS: Thank to the pre-printed Chain of Custody

RELINQUISHED BY / AFFILIATION: William M. Gregg
DATE: 10/2/12

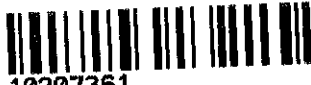
ACCEPTED BY / AFFILIATION: C7L pass
DATE: 10/2/12

SAMPLE CONDITIONS: Received on: 10/2/12, Custody Sealed: 10/2/12, Samples Intact: 10/2/12

SAMPLER NAME AND SIGNATURE: William M. Gregg
PRINT Name of SAMPLER: William M. Gregg
SIGNATURE of SAMPLER: William M. Gregg
DATE Signed (MM/DD/YYYY): 10/2/12

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name: <u>Summit Env</u>	Project #: WO# : 10207361
	Courier: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input checked="" type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	
Tracking Number: _____		

WO# : 10207361

 10207361

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: _____ Proj. Name: _____
 Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No
 Thermometer Used: ☒ 888A912167504 ☐ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun
 Cooler Temperature: 1.7 3.0 Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents: 10 02 12 TN
 Temp should be above freezing to 6°C

				Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>				
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No
 Person Contacted: _____ Date/Time: _____
 Comments/Resolution: _____

Project Manager Review: *Monah K. Kumb* Date: 10/2/12
 Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 01, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly Site
Pace Project No.: 10205787

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10205787001	0987-09 W421	Water	09/18/12 08:05	09/18/12 16:50
10205787002	0987-09 W420	Water	09/18/12 08:05	09/18/12 16:50
10205787003	0987-09 W24	Water	09/18/12 08:05	09/18/12 16:50
10205787004	0987-09 W421 FB	Water	09/18/12 08:05	09/18/12 16:50
10205787005	0987-09 W421 D	Water	09/18/12 08:05	09/18/12 16:50
10205787006	0987-09 W131	Water	09/18/12 13:51	09/18/12 16:50
10205787007	0987-09 W136	Water	09/18/12 15:47	09/18/12 16:50
10205787008	0987-09 W101	Water	09/18/12 11:10	09/18/12 16:50
10205787009	0987-09 W117	Water	09/18/12 12:21	09/18/12 16:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10205787001	0987-09 W421	EPA 8270 by SIM	JRH	18
10205787002	0987-09 W420	EPA 8270 by SIM	JRH	18
10205787003	0987-09 W24	EPA 8270 by SIM	JRH	18
10205787004	0987-09 W421 FB	EPA 8270 by SIM	JRH	18
10205787005	0987-09 W421 D	EPA 8270 by SIM	JRH	18
10205787006	0987-09 W131	EPA 8270 by SIM	JRH	18
10205787007	0987-09 W136	EPA 8270 by SIM	JRH	18
10205787008	0987-09 W101	EPA 8270 by SIM	JRH	18
10205787009	0987-09 W117	EPA 8270 by SIM	JRH	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W421		Lab ID: 10205787001		Collected: 09/18/12 08:05		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	127 ug/L		2.1	0.26	50	09/21/12 08:38	09/29/12 13:47	83-32-9	M1
Acenaphthylene	1.7 ug/L		0.041	0.0041	1	09/21/12 08:38	09/28/12 20:52	208-96-8	
Anthracene	23.7 ug/L		0.21	0.041	5	09/21/12 08:38	09/29/12 13:27	120-12-7	M1
Benzo(a)anthracene	16.3 ug/L		0.21	0.041	5	09/21/12 08:38	09/29/12 13:27	56-55-3	M1
Benzo(a)pyrene	9.7 ug/L		0.041	0.010	1	09/21/12 08:38	09/28/12 20:52	50-32-8	M1
Benzo(b)fluoranthene	15.6 ug/L		0.52	0.052	5	09/21/12 08:38	09/29/12 13:27	205-99-2	M1
Benzo(g,h,i)perylene	5.4 ug/L		0.041	0.010	1	09/21/12 08:38	09/28/12 20:52	191-24-2	M1
Benzo(k)fluoranthene	5.8 ug/L		0.041	0.0093	1	09/21/12 08:38	09/28/12 20:52	207-08-9	M1
Chrysene	13.9 ug/L		0.21	0.046	5	09/21/12 08:38	09/29/12 13:27	218-01-9	M1
Dibenz(a,h)anthracene	2.1 ug/L		0.041	0.0093	1	09/21/12 08:38	09/28/12 20:52	53-70-3	M1
Fluoranthene	77.9 ug/L		2.1	0.62	50	09/21/12 08:38	09/29/12 13:47	206-44-0	M1
Fluorene	78.4 ug/L		2.1	0.21	50	09/21/12 08:38	09/29/12 13:47	86-73-7	M1
Indeno(1,2,3-cd)pyrene	4.4 ug/L		0.041	0.010	1	09/21/12 08:38	09/28/12 20:52	193-39-5	M1
Naphthalene	474 ug/L		2.1	0.31	50	09/21/12 08:38	09/29/12 13:47	91-20-3	M1
Phenanthrene	153 ug/L		2.1	0.41	50	09/21/12 08:38	09/29/12 13:47	85-01-8	M1
Pyrene	48.2 ug/L		0.21	0.067	5	09/21/12 08:38	09/29/12 13:27	129-00-0	M1
Surrogates									
2-Fluorobiphenyl (S)	65 %		58-125		1	09/21/12 08:38	09/28/12 20:52	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	09/21/12 08:38	09/28/12 20:52	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W420		Lab ID: 10205787002		Collected: 09/18/12 08:05		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	116	ug/L	0.83	0.10	20	09/21/12 08:38	09/29/12 14:07	83-32-9	
Acenaphthylene	0.46	ug/L	0.042	0.0042	1	09/21/12 08:38	09/28/12 21:52	208-96-8	
Anthracene	2.2	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 21:52	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 21:52	56-55-3	
Benzo(a)pyrene	0.049	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 21:52	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 21:52	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 21:52	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 21:52	207-08-9	
Chrysene	0.061	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 21:52	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 21:52	53-70-3	
Fluoranthene	1.4	ug/L	0.042	0.012	1	09/21/12 08:38	09/28/12 21:52	206-44-0	
Fluorene	44.5	ug/L	0.83	0.083	20	09/21/12 08:38	09/29/12 14:07	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 21:52	193-39-5	
Naphthalene	1750	ug/L	20.8	3.1	500	09/21/12 08:38	09/30/12 23:01	91-20-3	
Phenanthrene	35.0	ug/L	0.83	0.17	20	09/21/12 08:38	09/29/12 14:07	85-01-8	
Pyrene	0.68	ug/L	0.042	0.014	1	09/21/12 08:38	09/28/12 21:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78	%	58-125		1	09/21/12 08:38	09/28/12 21:52	321-60-8	
Terphenyl-d14 (S)	90	%	75-125		1	09/21/12 08:38	09/28/12 21:52	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W24		Lab ID: 10205787003		Collected: 09/18/12 08:05		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.36	ug/L	0.041	0.0052	1	09/21/12 08:38	09/28/12 22:11	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 22:11	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 22:11	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 22:11	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 22:11	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 22:11	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 22:11	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 22:11	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 22:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 22:11	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/21/12 08:38	09/28/12 22:11	206-44-0	
Fluorene	0.11	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 22:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 22:11	193-39-5	
Naphthalene	3.0	ug/L	0.041	0.0062	1	09/21/12 08:38	09/28/12 22:11	91-20-3	
Phenanthrene	0.11	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 22:11	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/21/12 08:38	09/28/12 22:11	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	58-125		1	09/21/12 08:38	09/28/12 22:11	321-60-8	
Terphenyl-d14 (S)	84	%	75-125		1	09/21/12 08:38	09/28/12 22:11	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W421 FB		Lab ID: 10205787004		Collected: 09/18/12 08:05		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	09/21/12 08:38	09/28/12 22:31	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	09/21/12 08:38	09/28/12 22:31	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 22:31	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 22:31	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 22:31	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 22:31	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 22:31	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 22:31	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 22:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 22:31	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	09/21/12 08:38	09/28/12 22:31	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	09/21/12 08:38	09/28/12 22:31	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 22:31	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	09/21/12 08:38	09/28/12 22:31	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 22:31	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	09/21/12 08:38	09/28/12 22:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68 %		58-125		1	09/21/12 08:38	09/28/12 22:31	321-60-8	
Terphenyl-d14 (S)	79 %		75-125		1	09/21/12 08:38	09/28/12 22:31	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W421 D		Lab ID: 10205787005		Collected: 09/18/12 08:05		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	180 ug/L		2.1	0.26	50	09/21/12 08:38	09/29/12 15:46	83-32-9	
Acenaphthylene	2.5 ug/L		0.042	0.0042	1	09/21/12 08:38	09/28/12 22:51	208-96-8	
Anthracene	43.5 ug/L		0.42	0.083	10	09/21/12 08:38	09/29/12 15:26	120-12-7	
Benzo(a)anthracene	33.7 ug/L		0.42	0.083	10	09/21/12 08:38	09/29/12 15:26	56-55-3	
Benzo(a)pyrene	24.0 ug/L		0.42	0.10	10	09/21/12 08:38	09/29/12 15:26	50-32-8	
Benzo(b)fluoranthene	32.4 ug/L		1.0	0.10	10	09/21/12 08:38	09/29/12 15:26	205-99-2	
Benzo(g,h,i)perylene	12.8 ug/L		0.42	0.10	10	09/21/12 08:38	09/29/12 15:26	191-24-2	
Benzo(k)fluoranthene	8.3 ug/L		0.042	0.0094	1	09/21/12 08:38	09/28/12 22:51	207-08-9	
Chrysene	28.8 ug/L		0.42	0.094	10	09/21/12 08:38	09/29/12 15:26	218-01-9	
Dibenz(a,h)anthracene	4.2 ug/L		0.042	0.0094	1	09/21/12 08:38	09/28/12 22:51	53-70-3	
Fluoranthene	150 ug/L		2.1	0.63	50	09/21/12 08:38	09/29/12 15:46	206-44-0	
Fluorene	122 ug/L		2.1	0.21	50	09/21/12 08:38	09/29/12 15:46	86-73-7	
Indeno(1,2,3-cd)pyrene	9.0 ug/L		0.042	0.010	1	09/21/12 08:38	09/28/12 22:51	193-39-5	
Naphthalene	695 ug/L		10.4	1.6	250	09/21/12 08:38	09/30/12 22:41	91-20-3	
Phenanthrene	266 ug/L		2.1	0.42	50	09/21/12 08:38	09/29/12 15:46	85-01-8	
Pyrene	97.7 ug/L		0.42	0.14	10	09/21/12 08:38	09/29/12 15:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68 %		58-125		1	09/21/12 08:38	09/28/12 22:51	321-60-8	
Terphenyl-d14 (S)	86 %		75-125		1	09/21/12 08:38	09/28/12 22:51	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W131		Lab ID: 10205787006	Collected: 09/18/12 13:51	Received: 09/18/12 16:50	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.54	ug/L	0.041	0.0052	1	09/21/12 08:38	09/28/12 23:11	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 23:11	208-96-8	
Anthracene	0.12	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:11	120-12-7	
Benzo(a)anthracene	0.10	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:11	56-55-3	
Benzo(a)pyrene	0.077	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:11	50-32-8	
Benzo(b)fluoranthene	0.10	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 23:11	205-99-2	
Benzo(g,h,i)perylene	0.042	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:11	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:11	207-08-9	
Chrysene	0.089	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:11	53-70-3	
Fluoranthene	0.49	ug/L	0.041	0.012	1	09/21/12 08:38	09/28/12 23:11	206-44-0	
Fluorene	0.36	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 23:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:11	193-39-5	
Naphthalene	1.6	ug/L	0.041	0.0062	1	09/21/12 08:38	09/28/12 23:11	91-20-3	
Phenanthrene	0.81	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:11	85-01-8	
Pyrene	0.31	ug/L	0.041	0.013	1	09/21/12 08:38	09/28/12 23:11	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	58-125		1	09/21/12 08:38	09/28/12 23:11	321-60-8	
Terphenyl-d14 (S)	81	%	75-125		1	09/21/12 08:38	09/28/12 23:11	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W136		Lab ID: 10205787007		Collected: 09/18/12 15:47		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	09/21/12 08:38	09/28/12 23:30	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	09/21/12 08:38	09/28/12 23:30	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 23:30	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 23:30	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 23:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 23:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 23:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 23:30	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 23:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	09/21/12 08:38	09/28/12 23:30	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	09/21/12 08:38	09/28/12 23:30	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	09/21/12 08:38	09/28/12 23:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	09/21/12 08:38	09/28/12 23:30	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	09/21/12 08:38	09/28/12 23:30	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	09/21/12 08:38	09/28/12 23:30	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	09/21/12 08:38	09/28/12 23:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	09/21/12 08:38	09/28/12 23:30	321-60-8	
Terphenyl-d14 (S)	87 %		75-125		1	09/21/12 08:38	09/28/12 23:30	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W101		Lab ID: 10205787008		Collected: 09/18/12 11:10		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.20	ug/L	0.041	0.0052	1	09/21/12 08:38	09/28/12 23:50	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 23:50	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:50	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:50	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:50	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/28/12 23:50	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:50	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:50	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:50	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/28/12 23:50	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/21/12 08:38	09/28/12 23:50	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/28/12 23:50	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/28/12 23:50	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	09/21/12 08:38	09/28/12 23:50	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/28/12 23:50	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/21/12 08:38	09/28/12 23:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71 %		58-125		1	09/21/12 08:38	09/28/12 23:50	321-60-8	
Terphenyl-d14 (S)	78 %		75-125		1	09/21/12 08:38	09/28/12 23:50	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Sample: 0987-09 W117		Lab ID: 10205787009		Collected: 09/18/12 12:21		Received: 09/18/12 16:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0052	1	09/21/12 08:38	09/29/12 00:10	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/29/12 00:10	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/29/12 00:10	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/29/12 00:10	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/29/12 00:10	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/21/12 08:38	09/29/12 00:10	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/29/12 00:10	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/29/12 00:10	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/29/12 00:10	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/21/12 08:38	09/29/12 00:10	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/21/12 08:38	09/29/12 00:10	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/21/12 08:38	09/29/12 00:10	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/21/12 08:38	09/29/12 00:10	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	09/21/12 08:38	09/29/12 00:10	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/21/12 08:38	09/29/12 00:10	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/21/12 08:38	09/29/12 00:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73 %		58-125		1	09/21/12 08:38	09/29/12 00:10	321-60-8	
Terphenyl-d14 (S)	86 %		75-125		1	09/21/12 08:38	09/29/12 00:10	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

QC Batch:	OEXT/19760	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by SIM MSSV
Associated Lab Samples:	10205787001, 10205787002, 10205787003, 10205787004, 10205787005, 10205787006, 10205787007, 10205787008, 10205787009		

METHOD BLANK: 1292939 Matrix: Water

Associated Lab Samples: 10205787001, 10205787002, 10205787003, 10205787004, 10205787005, 10205787006, 10205787007, 10205787008, 10205787009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	09/28/12 19:34	
Acenaphthylene	ug/L	ND	0.040	09/28/12 19:34	
Anthracene	ug/L	ND	0.040	09/28/12 19:34	
Benzo(a)anthracene	ug/L	ND	0.040	09/28/12 19:34	
Benzo(a)pyrene	ug/L	ND	0.040	09/28/12 19:34	
Benzo(b)fluoranthene	ug/L	ND	0.10	09/28/12 19:34	
Benzo(g,h,i)perylene	ug/L	ND	0.040	09/28/12 19:34	
Benzo(k)fluoranthene	ug/L	ND	0.040	09/28/12 19:34	
Chrysene	ug/L	ND	0.040	09/28/12 19:34	
Dibenz(a,h)anthracene	ug/L	ND	0.040	09/28/12 19:34	
Fluoranthene	ug/L	ND	0.040	09/28/12 19:34	
Fluorene	ug/L	ND	0.040	09/28/12 19:34	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	09/28/12 19:34	
Naphthalene	ug/L	ND	0.040	09/28/12 19:34	
Phenanthrene	ug/L	ND	0.040	09/28/12 19:34	
Pyrene	ug/L	ND	0.040	09/28/12 19:34	
2-Fluorobiphenyl (S)	%	83	58-125	09/28/12 19:34	
Terphenyl-d14 (S)	%	94	75-125	09/28/12 19:34	

LABORATORY CONTROL SAMPLE: 1292940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.74	74	56-125	
Acenaphthylene	ug/L	1	0.73	73	55-125	
Anthracene	ug/L	1	0.82	82	63-125	
Benzo(a)anthracene	ug/L	1	0.77	77	61-125	
Benzo(a)pyrene	ug/L	1	0.86	86	67-125	
Benzo(b)fluoranthene	ug/L	1	0.82	82	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.91	91	68-125	
Benzo(k)fluoranthene	ug/L	1	0.90	90	60-125	
Chrysene	ug/L	1	0.83	83	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.94	94	60-125	
Fluoranthene	ug/L	1	0.92	92	64-125	
Fluorene	ug/L	1	0.77	77	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.90	90	67-125	
Naphthalene	ug/L	1	0.70	70	53-125	
Phenanthrene	ug/L	1	0.74	74	64-125	
Pyrene	ug/L	1	0.84	84	64-125	
2-Fluorobiphenyl (S)	%			79	58-125	
Terphenyl-d14 (S)	%			82	75-125	

Date: 10/01/2012 04:38 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1292941 1292942											
Parameter	Units	10205787001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	127	1	1.1	81.3	88.9	-4430	-3650	55-125	9	30 E,M1
Acenaphthylene	ug/L	1.7	1	1.1	2.3	2.6	57	85	55-125	13	30
Anthracene	ug/L	23.7	1	1.1	17.6	21.6	-587	-202	60-125	20	30 E,M1
Benzo(a)anthracene	ug/L	16.3	1	1.1	13.7	17.7	-254	128	55-125	25	30 E,M1
Benzo(a)pyrene	ug/L	9.7	1	1.1	8.9	12.1	-76	233	61-125	31	30 D6,E, M1
Benzo(b)fluoranthene	ug/L	15.6	1	1.1	11.6	17.6	-380	189	58-125	41	30 D6,E, M1
Benzo(g,h,i)perylene	ug/L	5.4	1	1.1	5.3	7.1	-12	164	63-125	30	30 M1
Benzo(k)fluoranthene	ug/L	5.8	1	1.1	5.5	5.6	-31	-26	55-125	.9	30 M1
Chrysene	ug/L	13.9	1	1.1	11.0	15.0	-275	107	61-125	31	30 D6,E, M1
Dibenz(a,h)anthracene	ug/L	2.1	1	1.1	2.4	3.1	33	101	60-125	26	30 M1
Fluoranthene	ug/L	77.9	1	1.1	45.2	58.7	-3140	-1830	68-125	26	30 E,M1
Fluorene	ug/L	78.4	1	1.1	49.3	56.8	-2790	-2050	60-125	14	30 E,M1
Indeno(1,2,3-cd)pyrene	ug/L	4.4	1	1.1	4.4	6.0	7	154	59-125	30	30 M1
Naphthalene	ug/L	474	1	1.1	220	217	-24400	-24500	50-125	2	30 E,M1
Phenanthrene	ug/L	153	1	1.1	86.3	111	-6380	-4000	63-125	25	30 E,M1
Pyrene	ug/L	48.2	1	1.1	35.8	46.1	-1180	-194	57-125	25	30 E,M1
2-Fluorobiphenyl (S)	%						70	70	58-125		
Terphenyl-d14 (S)	%						86	86	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10205787

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10205787001	0987-09 W421	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787002	0987-09 W420	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787003	0987-09 W24	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787004	0987-09 W421 FB	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787005	0987-09 W421 D	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787006	0987-09 W131	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787007	0987-09 W136	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787008	0987-09 W101	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611
10205787009	0987-09 W117	EPA 3510	OEXT/19760	EPA 8270 by SIM	MSSV/8611

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



10205787


Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company Name: Summit Environmental Solutions LLC		Report To: Bill Gregg		Attention: Kevin McLarnon	
Address: 1217 Bondage Blvd		Copy To:		Company Name: Summit Environmental Solutions LLC	
Contact: Scott Paul MLJ		Purchase Order No.: 0987-0009		Address: 1217 Bondage Blvd.	
Email To: Bgregg@summite.com		Project Name: SP/Reilly Site		Reference: Pace Project Manager	
Phone: 661-262-4236		Project Number: 0987-0009		Pace Profile #:	
Requested Due Date/TAT:				Site Location: WI	
				STATE:	
				Regulatory Agency: NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
				Pace Project No./ Lab I.D.: 1496145	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	SAMPLE ID (A-Z, 0-9 / -)	Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test ↑	Y/N	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
							COMPOSITE START	COMPOSITE END/GRAB						DATE	TIME	DATE	TIME		
1	0987-09 W 421	DW	WT G		WT G			9/18/12	805									001	
2	0987-09 W 420	WT	WT G		WT G													002	
3	0987-09 W 24	WW	WT G		WT G													003	
4	0987-09 W 421 FB	P	WT G		WT G													004	
5	0987-09 W 421 D	SL	WT G		WT G													005	
6	0987-09 W 421 MS	OL	WT G		WT G													006	
7	0987-09 W 421 MSD	WP	WT G		WT G													007	
8	0987-09 W 131	AR	WT G		WT G													008	
9	0987-09 W 136	TS	WT G		WT G													009	
10	0987-09 W 101	OT	WT G		WT G													010	
11	0987-09 W 117		WT G		WT G													011	
12			WT G		WT G													012	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS						
	<i>Robert Edman</i>	9/18/12	16:50	<i>AL PALE</i>	9/18/12	16:50	Temp in °C	Received on	Sealed Cooler	Samples Intact	Y	N	Y
							0.3	Y	N	Y	N	Y	
							2.1	Y	N	Y	N	Y	

SAMPLER NAME AND SIGNATURE		DATE Signed (MM/DD/YY):
PRINT Name of SAMPLER:		
SIGNATURE of SAMPLER:		

ORIGINAL

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22 Aug 2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10205787



10205787

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☐ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 888A912167504 ☐ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.4, 0.3, 2.1 Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents: 9/19/12
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>Time + date not on COC</u>
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>	
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Bill Gregg

Date/Time: 9/19/12 8:58

Comments/Resolution: Samples should be analysed for standard PTH list, not extended CPTH list as regulated on the COC.

Project Manager Review:

Maiah Krum

Date: 9/19/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 03, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly Site
Pace Project No.: 10206124

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 20, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10206124001	0987-09 W121	Water	09/20/12 12:14	09/20/12 16:57
10206124002	0987-09 W128	Water	09/20/12 12:52	09/20/12 16:57
10206124003	0987-09 W143	Water	09/20/12 14:36	09/20/12 16:57
10206124004	0987-09 W428	Water	09/20/12 10:37	09/20/12 16:57
10206124005	0987-09 W427	Water	09/20/12 09:28	09/20/12 16:57
10206124006	0987-09 W439	Water	09/20/12 07:51	09/20/12 16:57
10206124007	0987-09 W439 D	Water	09/20/12 07:51	09/20/12 16:57
10206124008	0987-09 W439 FB	Water	09/20/12 07:51	09/20/12 16:57
10206124009	0987-09 W426	Water	09/20/12 08:06	09/20/12 16:57
10206124010	0987-09 W22	Water	09/20/12 15:42	09/20/12 16:57

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10206124001	0987-09 W121	EPA 8270 by SIM	DRE	18
10206124002	0987-09 W128	EPA 8270 by SIM	DRE	18
10206124003	0987-09 W143	EPA 8270 by SIM	DRE	18
10206124004	0987-09 W428	EPA 8270 by SIM	DRE	18
10206124005	0987-09 W427	EPA 8270 by SIM	DRE	18
10206124006	0987-09 W439	EPA 8270 by SIM	DRE	18
10206124007	0987-09 W439 D	EPA 8270 by SIM	DRE	18
10206124008	0987-09 W439 FB	EPA 8270 by SIM	DRE	18
10206124009	0987-09 W426	EPA 8270 by SIM	DRE	18
10206124010	0987-09 W22	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W121		Lab ID: 10206124001		Collected: 09/20/12 12:14		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0052	1	09/26/12 09:29	09/30/12 15:27	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 15:27	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 15:27	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 15:27	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 15:27	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 15:27	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 15:27	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 15:27	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 15:27	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 15:27	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 15:27	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 15:27	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 15:27	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	09/26/12 09:29	09/30/12 15:27	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 15:27	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 15:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	09/26/12 09:29	09/30/12 15:27	321-60-8	
Terphenyl-d14 (S)	83 %		75-125		1	09/26/12 09:29	09/30/12 15:27	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W128		Lab ID: 10206124002	Collected: 09/20/12 12:52	Received: 09/20/12 16:57	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.040	0.0050	1	09/26/12 09:29	09/30/12 15:47	83-32-9	
Acenaphthylene	ND ug/L		0.040	0.0040	1	09/26/12 09:29	09/30/12 15:47	208-96-8	
Anthracene	ND ug/L		0.040	0.0080	1	09/26/12 09:29	09/30/12 15:47	120-12-7	
Benzo(a)anthracene	ND ug/L		0.040	0.0080	1	09/26/12 09:29	09/30/12 15:47	56-55-3	
Benzo(a)pyrene	ND ug/L		0.040	0.010	1	09/26/12 09:29	09/30/12 15:47	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.10	0.010	1	09/26/12 09:29	09/30/12 15:47	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.040	0.010	1	09/26/12 09:29	09/30/12 15:47	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.040	0.0090	1	09/26/12 09:29	09/30/12 15:47	207-08-9	
Chrysene	ND ug/L		0.040	0.0090	1	09/26/12 09:29	09/30/12 15:47	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.040	0.0090	1	09/26/12 09:29	09/30/12 15:47	53-70-3	
Fluoranthene	ND ug/L		0.040	0.012	1	09/26/12 09:29	09/30/12 15:47	206-44-0	
Fluorene	ND ug/L		0.040	0.0040	1	09/26/12 09:29	09/30/12 15:47	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.040	0.010	1	09/26/12 09:29	09/30/12 15:47	193-39-5	
Naphthalene	ND ug/L		0.040	0.0060	1	09/26/12 09:29	09/30/12 15:47	91-20-3	
Phenanthrene	ND ug/L		0.040	0.0080	1	09/26/12 09:29	09/30/12 15:47	85-01-8	
Pyrene	ND ug/L		0.040	0.013	1	09/26/12 09:29	09/30/12 15:47	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	74 %		58-125		1	09/26/12 09:29	09/30/12 15:47	321-60-8	
Terphenyl-d14 (S)	78 %		75-125		1	09/26/12 09:29	09/30/12 15:47	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W143		Lab ID: 10206124003		Collected: 09/20/12 14:36		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.16	ug/L	0.042	0.0052	1	09/26/12 09:29	09/30/12 16:06	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	09/26/12 09:29	09/30/12 16:06	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	09/26/12 09:29	09/30/12 16:06	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	09/26/12 09:29	09/30/12 16:06	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	09/26/12 09:29	09/30/12 16:06	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 16:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	09/26/12 09:29	09/30/12 16:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	09/26/12 09:29	09/30/12 16:06	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	09/26/12 09:29	09/30/12 16:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	09/26/12 09:29	09/30/12 16:06	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	09/26/12 09:29	09/30/12 16:06	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	09/26/12 09:29	09/30/12 16:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	09/26/12 09:29	09/30/12 16:06	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	09/26/12 09:29	09/30/12 16:06	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	09/26/12 09:29	09/30/12 16:06	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	09/26/12 09:29	09/30/12 16:06	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	09/26/12 09:29	09/30/12 16:06	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	09/26/12 09:29	09/30/12 16:06	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W428		Lab ID: 10206124004		Collected: 09/20/12 10:37		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0052	1	09/26/12 09:29	09/30/12 16:26	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 16:26	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:26	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:26	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:26	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 16:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 16:26	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 16:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 16:26	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 16:26	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 16:26	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:26	193-39-5	
Naphthalene	0.059	ug/L	0.041	0.0062	1	09/26/12 09:29	09/30/12 16:26	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:26	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 16:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78 %		58-125		1	09/26/12 09:29	09/30/12 16:26	321-60-8	
Terphenyl-d14 (S)	86 %		75-125		1	09/26/12 09:29	09/30/12 16:26	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W427		Lab ID: 10206124005		Collected: 09/20/12 09:28		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 16:46	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 16:46	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:46	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:46	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:46	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 16:46	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 16:46	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 16:46	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 16:46	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 16:46	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 16:46	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 16:46	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	09/26/12 09:29	09/30/12 16:46	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 16:46	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 16:46	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70 %		58-125		1	09/26/12 09:29	09/30/12 16:46	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	09/26/12 09:29	09/30/12 16:46	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W439		Lab ID: 10206124006		Collected: 09/20/12 07:51		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	36.9	ug/L	0.41	0.052	10	09/26/12 09:29	10/01/12 18:17	83-32-9	M1
Acenaphthylene	0.46	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 17:06	208-96-8	
Anthracene	0.39	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 17:06	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 17:06	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 17:06	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 17:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 17:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 17:06	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 17:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	09/26/12 09:29	09/30/12 17:06	53-70-3	
Fluoranthene	0.11	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 17:06	206-44-0	
Fluorene	6.0	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 17:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 17:06	193-39-5	
Naphthalene	359	ug/L	2.1	0.31	50	09/26/12 09:29	10/01/12 17:18	91-20-3	M1
Phenanthrene	4.6	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 17:06	85-01-8	
Pyrene	0.050	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 17:06	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	58-125		1	09/26/12 09:29	09/30/12 17:06	321-60-8	
Terphenyl-d14 (S)	81	%	75-125		1	09/26/12 09:29	09/30/12 17:06	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W439 D		Lab ID: 10206124007		Collected: 09/20/12 07:51		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	42.2	ug/L	0.41	0.051	10	09/26/12 09:29	10/01/12 18:37	83-32-9	
Acenaphthylene	0.51	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 18:05	208-96-8	
Anthracene	0.42	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 18:05	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 18:05	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:05	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 18:05	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:05	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 18:05	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 18:05	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 18:05	53-70-3	
Fluoranthene	0.12	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 18:05	206-44-0	
Fluorene	6.4	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 18:05	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:05	193-39-5	
Naphthalene	429	ug/L	2.0	0.31	50	09/26/12 09:29	10/01/12 17:38	91-20-3	
Phenanthrene	4.8	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 18:05	85-01-8	
Pyrene	0.054	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 18:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	58-125		1	09/26/12 09:29	09/30/12 18:05	321-60-8	
Terphenyl-d14 (S)	84	%	75-125		1	09/26/12 09:29	09/30/12 18:05	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W439 FB		Lab ID: 10206124008	Collected: 09/20/12 07:51	Received: 09/20/12 16:57	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.042	0.0053	1	09/26/12 09:29	09/30/12 18:25	83-32-9	
Acenaphthylene	ND ug/L		0.042	0.0042	1	09/26/12 09:29	09/30/12 18:25	208-96-8	
Anthracene	ND ug/L		0.042	0.0084	1	09/26/12 09:29	09/30/12 18:25	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0084	1	09/26/12 09:29	09/30/12 18:25	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.011	1	09/26/12 09:29	09/30/12 18:25	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.11	0.011	1	09/26/12 09:29	09/30/12 18:25	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.011	1	09/26/12 09:29	09/30/12 18:25	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0095	1	09/26/12 09:29	09/30/12 18:25	207-08-9	
Chrysene	ND ug/L		0.042	0.0095	1	09/26/12 09:29	09/30/12 18:25	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0095	1	09/26/12 09:29	09/30/12 18:25	53-70-3	
Fluoranthene	ND ug/L		0.042	0.013	1	09/26/12 09:29	09/30/12 18:25	206-44-0	
Fluorene	ND ug/L		0.042	0.0042	1	09/26/12 09:29	09/30/12 18:25	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.011	1	09/26/12 09:29	09/30/12 18:25	193-39-5	
Naphthalene	ND ug/L		0.042	0.0063	1	09/26/12 09:29	09/30/12 18:25	91-20-3	
Phenanthrene	ND ug/L		0.042	0.0084	1	09/26/12 09:29	09/30/12 18:25	85-01-8	
Pyrene	ND ug/L		0.042	0.014	1	09/26/12 09:29	09/30/12 18:25	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61 %		58-125		1	09/26/12 09:29	09/30/12 18:25	321-60-8	
Terphenyl-d14 (S)	76 %		75-125		1	09/26/12 09:29	09/30/12 18:25	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W426		Lab ID: 10206124009		Collected: 09/20/12 08:06		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	80.8	ug/L	0.41	0.051	10	09/26/12 09:29	10/01/12 16:58	83-32-9	
Acenaphthylene	16.8	ug/L	0.41	0.041	10	09/26/12 09:29	10/01/12 16:58	208-96-8	
Anthracene	4.9	ug/L	0.041	0.0081	1	09/26/12 09:29	09/30/12 18:44	120-12-7	
Benzo(a)anthracene	0.16	ug/L	0.041	0.0081	1	09/26/12 09:29	09/30/12 18:44	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:44	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 18:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:44	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0091	1	09/26/12 09:29	09/30/12 18:44	207-08-9	
Chrysene	0.083	ug/L	0.041	0.0091	1	09/26/12 09:29	09/30/12 18:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0091	1	09/26/12 09:29	09/30/12 18:44	53-70-3	
Fluoranthene	6.9	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 18:44	206-44-0	
Fluorene	61.8	ug/L	0.41	0.041	10	09/26/12 09:29	10/01/12 16:58	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 18:44	193-39-5	
Naphthalene	1.8	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 18:44	91-20-3	
Phenanthrene	53.6	ug/L	0.41	0.081	10	09/26/12 09:29	10/01/12 16:58	85-01-8	
Pyrene	4.4	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 18:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	74	%	58-125		1	09/26/12 09:29	09/30/12 18:44	321-60-8	
Terphenyl-d14 (S)	82	%	75-125		1	09/26/12 09:29	09/30/12 18:44	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Sample: 0987-09 W22		Lab ID: 10206124010		Collected: 09/20/12 15:42		Received: 09/20/12 16:57		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.049	ug/L	0.040	0.0051	1	09/26/12 09:29	09/30/12 19:04	83-32-9	
Acenaphthylene	ND	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 19:04	208-96-8	
Anthracene	ND	ug/L	0.040	0.0081	1	09/26/12 09:29	09/30/12 19:04	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.040	0.0081	1	09/26/12 09:29	09/30/12 19:04	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 19:04	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 19:04	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 19:04	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.040	0.0091	1	09/26/12 09:29	09/30/12 19:04	207-08-9	
Chrysene	ND	ug/L	0.040	0.0091	1	09/26/12 09:29	09/30/12 19:04	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.040	0.0091	1	09/26/12 09:29	09/30/12 19:04	53-70-3	
Fluoranthene	ND	ug/L	0.040	0.012	1	09/26/12 09:29	09/30/12 19:04	206-44-0	
Fluorene	ND	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 19:04	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 19:04	193-39-5	
Naphthalene	0.051	ug/L	0.040	0.0061	1	09/26/12 09:29	09/30/12 19:04	91-20-3	
Phenanthrene	ND	ug/L	0.040	0.0081	1	09/26/12 09:29	09/30/12 19:04	85-01-8	
Pyrene	ND	ug/L	0.040	0.013	1	09/26/12 09:29	09/30/12 19:04	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73 %		58-125		1	09/26/12 09:29	09/30/12 19:04	321-60-8	
Terphenyl-d14 (S)	78 %		75-125		1	09/26/12 09:29	09/30/12 19:04	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

QC Batch:	OEXT/19795	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by SIM MSSV
Associated Lab Samples:	10206124001, 10206124002, 10206124003, 10206124004, 10206124005, 10206124006, 10206124007, 10206124008, 10206124009, 10206124010		

METHOD BLANK: 1295967 Matrix: Water

Associated Lab Samples: 10206124001, 10206124002, 10206124003, 10206124004, 10206124005, 10206124006, 10206124007, 10206124008, 10206124009, 10206124010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	09/30/12 14:47	
Acenaphthylene	ug/L	ND	0.040	09/30/12 14:47	
Anthracene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(a)anthracene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(a)pyrene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(b)fluoranthene	ug/L	ND	0.10	09/30/12 14:47	
Benzo(g,h,i)perylene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(k)fluoranthene	ug/L	ND	0.040	09/30/12 14:47	
Chrysene	ug/L	ND	0.040	09/30/12 14:47	
Dibenz(a,h)anthracene	ug/L	ND	0.040	09/30/12 14:47	
Fluoranthene	ug/L	ND	0.040	09/30/12 14:47	
Fluorene	ug/L	ND	0.040	09/30/12 14:47	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	09/30/12 14:47	
Naphthalene	ug/L	ND	0.040	09/30/12 14:47	
Phenanthrene	ug/L	ND	0.040	09/30/12 14:47	
Pyrene	ug/L	ND	0.040	09/30/12 14:47	
2-Fluorobiphenyl (S)	%	75	58-125	09/30/12 14:47	
Terphenyl-d14 (S)	%	75	75-125	09/30/12 14:47	

LABORATORY CONTROL SAMPLE: 1295968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.81	81	56-125	
Acenaphthylene	ug/L	1	0.78	78	55-125	
Anthracene	ug/L	1	0.86	86	63-125	
Benzo(a)anthracene	ug/L	1	0.80	80	61-125	
Benzo(a)pyrene	ug/L	1	0.95	95	67-125	
Benzo(b)fluoranthene	ug/L	1	0.86	86	64-125	
Benzo(g,h,i)perylene	ug/L	1	1.0	100	68-125	
Benzo(k)fluoranthene	ug/L	1	0.99	99	60-125	
Chrysene	ug/L	1	0.91	91	67-125	
Dibenz(a,h)anthracene	ug/L	1	1.0	102	60-125	
Fluoranthene	ug/L	1	0.95	95	64-125	
Fluorene	ug/L	1	0.84	84	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.98	98	67-125	
Naphthalene	ug/L	1	0.80	80	53-125	
Phenanthrene	ug/L	1	0.78	78	64-125	
Pyrene	ug/L	1	0.93	93	64-125	
2-Fluorobiphenyl (S)	%			86	58-125	
Terphenyl-d14 (S)	%			90	75-125	

Date: 10/03/2012 11:25 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295969 1295970											
Parameter	Units	10206124006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	36.9	1	1	32.5	31.1	-424	-565	55-125	4	E,M1
Acenaphthylene	ug/L	0.46	1	1	1.2	1.2	75	70	55-125	5	30
Anthracene	ug/L	0.39	1	1	1.3	1.2	88	83	60-125	5	30
Benzo(a)anthracene	ug/L	ND	1	1	0.86	0.83	83	82	55-125	3	30
Benzo(a)pyrene	ug/L	ND	1	1	0.98	0.89	95	87	61-125	9	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.89	0.85	87	83	58-125	5	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.99	0.95	96	93	63-125	4	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.97	0.93	94	92	55-125	4	30
Chrysene	ug/L	ND	1	1	0.89	0.85	86	83	61-125	5	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	1.0	0.97	101	95	60-125	6	30
Fluoranthene	ug/L	0.11	1	1	1.1	1.0	96	91	68-125	6	30
Fluorene	ug/L	6.0	1	1	7.2	7.0	119	104	60-125	2	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.99	0.94	96	92	59-125	5	30
Naphthalene	ug/L	359	1	1	201	182	-15300	-17300	50-125	10	E,M1
Phenanthrene	ug/L	4.6	1	1	5.8	5.6	120	97	63-125	4	30
Pyrene	ug/L	0.050	1	1	0.98	0.94	90	87	57-125	4	30
2-Fluorobiphenyl (S)	%						78	70	58-125		
Terphenyl-d14 (S)	%						87	85	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295971 1295972											
Parameter	Units	10206394002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.78	0.73	77	72	55-125	7	30
Acenaphthylene	ug/L	ND	1	1	0.74	0.68	73	67	55-125	8	30
Anthracene	ug/L	ND	1	1	0.92	0.87	90	86	60-125	5	30
Benzo(a)anthracene	ug/L	ND	1	1	0.78	0.75	77	74	55-125	5	30
Benzo(a)pyrene	ug/L	ND	1	1	0.93	0.89	91	88	61-125	4	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.81	0.76	80	75	58-125	7	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.95	0.91	94	90	63-125	4	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.97	0.95	95	94	55-125	2	30
Chrysene	ug/L	ND	1	1	0.91	0.84	89	84	61-125	7	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.97	0.93	95	92	60-125	4	30
Fluoranthene	ug/L	ND	1	1	1.0	0.97	100	96	68-125	4	30
Fluorene	ug/L	ND	1	1	0.83	0.77	82	76	60-125	8	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.94	0.90	92	89	59-125	4	30
Naphthalene	ug/L	0.046	1	1	0.74	0.69	68	64	50-125	7	30
Phenanthrene	ug/L	ND	1	1	0.84	0.80	83	80	63-125	5	30
Pyrene	ug/L	ND	1	1	0.90	0.89	88	88	57-125	.6	30
2-Fluorobiphenyl (S)	%						79	72	58-125		
Terphenyl-d14 (S)	%						82	81	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206124

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10206124001	0987-09 W121	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124002	0987-09 W128	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124003	0987-09 W143	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124004	0987-09 W428	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124005	0987-09 W427	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124006	0987-09 W439	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124007	0987-09 W439 D	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124008	0987-09 W439 FB	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124009	0987-09 W426	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206124010	0987-09 W22	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Summit Environments LLC	Report To:	Bill Gregg	Attention:	Kevin McLarnon
Address:	1217 Bandana Blvd N. St. Paul, MN	Copy To:		Company Name:	Summit Environments LLC
Email To:	B.Gregg@summite.com	Purchase Order No.:	0987-0009	Address:	1217 Bandana Blvd. N., St. Paul
Phone:	651-263-4234	Project Name:	SLP/Railly Site	Face Quote Reference:	
Requested Due Date/TAT:		Project Number:	0987-0009	Face Project Manager:	
				REGULATORY AGENCY	
				<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
				<input type="checkbox"/> UST	<input type="checkbox"/> RCRA
				DRINKING WATER	
				OTHER	
				Site Location	MN
				STATE:	

Section D Required Client Information		Matrix Codes MATRIX / CODE						Requested Analysis Filtered (Y/N)												
		DW	WT	WW	P	SL	OL	WP	TS	OT										
		Drinking Water	Water	Waste Water	Product	Soil/Solid	Oil	Wipe	Air	Tissue										
		SAMPLE ID (A-Z, 0-9/-) Sample IDs MUST BE UNIQUE																		
ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=CMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		PRESERVATIVES				Analysis Test ↓									
			COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y/N						
1	0987-09 W 121	G	9/20	12:14			X							X	CPAH	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.			
2	0987-09 W 128	G	9/20	12:52			X							X			001			
3	0987-09 W 143	G	9/20	14:30			X							X			002			
4	0987-09 W 428	G	9/20	10:37			X							X			003			
5	0987-09 W 427	G	9/20	9:28			X							X			004			
6	0987-09 W 439	G	9/20	7:51			X							X			005			
7	0987-09 W 439 D	G	9/20	7:51			X							X			006			
8	0987-09 W 439 NS	G	9/20	7:51			X							X			007			
9	0987-09 W 439 MSD	G	9/20	7:51			X							X			008			
10	0987-09 W 439 FB	G	9/20	7:51			X							X			009			
11	0987-09 W 426	G	9/20	8:06			X							X			010			
12	0987-09 W 22	G	9/20	15:42			X							X						
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS											
Rebecca Eiden		Rebecca Eiden	9/20/12	16:57	J EACRE		9/20/12	16:57	Temp in °C		Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)							


ORIGINAL


SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:
SIGNATURE of SAMPLER:

Rebecca Eiden
Rebecca Eiden

DATE Signed (MM/DD/YYYY):
9/20/12

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name: <u>Summit</u>	Project #:	WO#: 10206124 
Courier: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input checked="" type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other:			
Tracking Number:			
Custody Seal on Cooler/Box Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Seals Intact? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Packing Material: <input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other:		Temp Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Thermometer Used: <input type="checkbox"/> B88A912167504 <input checked="" type="checkbox"/> 80512447		Type of Ice: <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None	
Cooler Temperature: _____		Biological Tissue Frozen? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Temp should be above freezing to 6°C		Date and Initials of Person Examining Contents: <u>OR 9/20/12</u>	

			Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.	<u>9.20</u>
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.	<u>Extra Bottle for MSD W4393/</u> <u>Missing sample for 6439 D/L</u>
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>			
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	<input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed:	Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

CLIENT NOTIFICATION/RESOLUTION		Field Data Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Person Contacted: <u>Bill Gregg</u>	Date/Time: <u>9/21/12 9:42</u>	
Comments/Resolution: <u>Analyze samples for standard list PHTs, not CPATs per Bill.</u>		

Project Manager Review: <u>Maurice V. Smith</u>	Date: <u>9/21/12</u>
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)	

October 03, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly Site
Pace Project No.: 10206394

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 21, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10206394001	0987-0009 W411	Water	09/21/12 12:21	09/21/12 16:33
10206394002	0987-0009 W412	Water	09/21/12 15:16	09/21/12 16:33
10206394003	0987-0009 W18	Water	09/21/12 10:26	09/21/12 16:33
10206394004	0987-0009 W14	Water	09/21/12 09:16	09/21/12 16:33
10206394005	0987-0009 W9	Water	09/21/12 08:44	09/21/12 16:33
10206394006	0987-0009 W130	Water	09/21/12 13:53	09/21/12 16:33
10206394007	0987-0009 W412D	Water	09/21/12 15:16	09/21/12 16:33
10206394008	0987-0009 W412FB	Water	09/21/12 15:16	09/21/12 16:33

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10206394001	0987-0009 W411	EPA 8270 by SIM	DRE	18
10206394002	0987-0009 W412	EPA 8270 by SIM	DRE	18
10206394003	0987-0009 W18	EPA 8270 by SIM	DRE	18
10206394004	0987-0009 W14	EPA 8270 by SIM	DRE	18
10206394005	0987-0009 W9	EPA 8270 by SIM	DRE	18
10206394006	0987-0009 W130	EPA 8270 by SIM	DRE	18
10206394007	0987-0009 W412D	EPA 8270 by SIM	DRE	18
10206394008	0987-0009 W412FB	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W411		Lab ID: 10206394001		Collected: 09/21/12 12:21		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 19:24	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 19:24	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:24	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:24	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:24	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 19:24	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:24	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:24	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:24	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:24	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 19:24	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 19:24	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:24	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 19:24	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:24	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 19:24	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	09/26/12 09:29	09/30/12 19:24	321-60-8	
Terphenyl-d14 (S)	80 %		75-125		1	09/26/12 09:29	09/30/12 19:24	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W412		Lab ID: 10206394002		Collected: 09/21/12 15:16		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 19:44	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 19:44	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:44	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:44	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:44	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 19:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:44	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:44	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 19:44	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 19:44	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 19:44	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 19:44	193-39-5	
Naphthalene	0.046	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 19:44	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 19:44	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 19:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	09/26/12 09:29	09/30/12 19:44	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	09/26/12 09:29	09/30/12 19:44	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W18		Lab ID: 10206394003		Collected: 09/21/12 10:26		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	4.0	ug/L	0.040	0.0050	1	09/26/12 09:29	09/30/12 20:43	83-32-9	
Acenaphthylene	0.15	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 20:43	208-96-8	
Anthracene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 20:43	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 20:43	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 20:43	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 20:43	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 20:43	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 20:43	207-08-9	
Chrysene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 20:43	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 20:43	53-70-3	
Fluoranthene	ND	ug/L	0.040	0.012	1	09/26/12 09:29	09/30/12 20:43	206-44-0	
Fluorene	0.30	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 20:43	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 20:43	193-39-5	
Naphthalene	3.7	ug/L	0.040	0.0060	1	09/26/12 09:29	09/30/12 20:43	91-20-3	
Phenanthrene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 20:43	85-01-8	
Pyrene	ND	ug/L	0.040	0.013	1	09/26/12 09:29	09/30/12 20:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	82	%	58-125		1	09/26/12 09:29	09/30/12 20:43	321-60-8	
Terphenyl-d14 (S)	87	%	75-125		1	09/26/12 09:29	09/30/12 20:43	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W14		Lab ID: 10206394004		Collected: 09/21/12 09:16		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 21:03	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 21:03	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:03	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:03	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:03	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 21:03	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:03	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:03	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:03	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:03	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 21:03	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 21:03	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:03	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 21:03	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:03	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 21:03	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72 %		58-125		1	09/26/12 09:29	09/30/12 21:03	321-60-8	
Terphenyl-d14 (S)	75 %		75-125		1	09/26/12 09:29	09/30/12 21:03	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W9		Lab ID: 10206394005	Collected: 09/21/12 08:44	Received: 09/21/12 16:33	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.90	ug/L	0.040	0.0050	1	09/26/12 09:29	09/30/12 21:22	83-32-9	
Acenaphthylene	ND	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 21:22	208-96-8	
Anthracene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 21:22	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 21:22	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 21:22	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 21:22	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 21:22	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 21:22	207-08-9	
Chrysene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 21:22	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.040	0.0090	1	09/26/12 09:29	09/30/12 21:22	53-70-3	
Fluoranthene	ND	ug/L	0.040	0.012	1	09/26/12 09:29	09/30/12 21:22	206-44-0	
Fluorene	0.26	ug/L	0.040	0.0040	1	09/26/12 09:29	09/30/12 21:22	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.040	0.010	1	09/26/12 09:29	09/30/12 21:22	193-39-5	
Naphthalene	125	ug/L	0.80	0.12	20	09/26/12 09:29	10/01/12 17:57	91-20-3	
Phenanthrene	ND	ug/L	0.040	0.0080	1	09/26/12 09:29	09/30/12 21:22	85-01-8	
Pyrene	ND	ug/L	0.040	0.013	1	09/26/12 09:29	09/30/12 21:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78	%	58-125		1	09/26/12 09:29	09/30/12 21:22	321-60-8	
Terphenyl-d14 (S)	86	%	75-125		1	09/26/12 09:29	09/30/12 21:22	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W130		Lab ID: 10206394006	Collected: 09/21/12 13:53	Received: 09/21/12 16:33	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 21:42	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 21:42	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:42	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:42	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:42	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 21:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:42	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:42	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 21:42	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 21:42	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 21:42	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 21:42	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 21:42	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 21:42	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 21:42	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78 %		58-125		1	09/26/12 09:29	09/30/12 21:42	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	09/26/12 09:29	09/30/12 21:42	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W412D		Lab ID: 10206394007		Collected: 09/21/12 15:16		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0051	1	09/26/12 09:29	09/30/12 22:02	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 22:02	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 22:02	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 22:02	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 22:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	0.010	1	09/26/12 09:29	09/30/12 22:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 22:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 22:02	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 22:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	09/26/12 09:29	09/30/12 22:02	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	09/26/12 09:29	09/30/12 22:02	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	09/26/12 09:29	09/30/12 22:02	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	09/26/12 09:29	09/30/12 22:02	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0061	1	09/26/12 09:29	09/30/12 22:02	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	09/26/12 09:29	09/30/12 22:02	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	09/26/12 09:29	09/30/12 22:02	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77 %		58-125		1	09/26/12 09:29	09/30/12 22:02	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	09/26/12 09:29	09/30/12 22:02	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Sample: 0987-0009 W412FB		Lab ID: 10206394008		Collected: 09/21/12 15:16		Received: 09/21/12 16:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.043	0.0054	1	09/26/12 09:29	09/30/12 22:22	83-32-9	
Acenaphthylene	ND	ug/L	0.043	0.0043	1	09/26/12 09:29	09/30/12 22:22	208-96-8	
Anthracene	ND	ug/L	0.043	0.0086	1	09/26/12 09:29	09/30/12 22:22	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0086	1	09/26/12 09:29	09/30/12 22:22	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	09/26/12 09:29	09/30/12 22:22	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.11	0.011	1	09/26/12 09:29	09/30/12 22:22	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	09/26/12 09:29	09/30/12 22:22	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0097	1	09/26/12 09:29	09/30/12 22:22	207-08-9	
Chrysene	ND	ug/L	0.043	0.0097	1	09/26/12 09:29	09/30/12 22:22	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0097	1	09/26/12 09:29	09/30/12 22:22	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	09/26/12 09:29	09/30/12 22:22	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	09/26/12 09:29	09/30/12 22:22	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	09/26/12 09:29	09/30/12 22:22	193-39-5	
Naphthalene	ND	ug/L	0.043	0.0065	1	09/26/12 09:29	09/30/12 22:22	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0086	1	09/26/12 09:29	09/30/12 22:22	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	09/26/12 09:29	09/30/12 22:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	09/26/12 09:29	09/30/12 22:22	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	09/26/12 09:29	09/30/12 22:22	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

QC Batch:	OEXT/19795	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by SIM MSSV
Associated Lab Samples:	10206394001, 10206394002, 10206394003, 10206394004, 10206394005, 10206394006, 10206394007, 10206394008		

METHOD BLANK: 1295967 Matrix: Water

Associated Lab Samples: 10206394001, 10206394002, 10206394003, 10206394004, 10206394005, 10206394006, 10206394007, 10206394008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	09/30/12 14:47	
Acenaphthylene	ug/L	ND	0.040	09/30/12 14:47	
Anthracene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(a)anthracene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(a)pyrene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(b)fluoranthene	ug/L	ND	0.10	09/30/12 14:47	
Benzo(g,h,i)perylene	ug/L	ND	0.040	09/30/12 14:47	
Benzo(k)fluoranthene	ug/L	ND	0.040	09/30/12 14:47	
Chrysene	ug/L	ND	0.040	09/30/12 14:47	
Dibenz(a,h)anthracene	ug/L	ND	0.040	09/30/12 14:47	
Fluoranthene	ug/L	ND	0.040	09/30/12 14:47	
Fluorene	ug/L	ND	0.040	09/30/12 14:47	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	09/30/12 14:47	
Naphthalene	ug/L	ND	0.040	09/30/12 14:47	
Phenanthrene	ug/L	ND	0.040	09/30/12 14:47	
Pyrene	ug/L	ND	0.040	09/30/12 14:47	
2-Fluorobiphenyl (S)	%	75	58-125	09/30/12 14:47	
Terphenyl-d14 (S)	%	75	75-125	09/30/12 14:47	

LABORATORY CONTROL SAMPLE: 1295968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.81	81	56-125	
Acenaphthylene	ug/L	1	0.78	78	55-125	
Anthracene	ug/L	1	0.86	86	63-125	
Benzo(a)anthracene	ug/L	1	0.80	80	61-125	
Benzo(a)pyrene	ug/L	1	0.95	95	67-125	
Benzo(b)fluoranthene	ug/L	1	0.86	86	64-125	
Benzo(g,h,i)perylene	ug/L	1	1.0	100	68-125	
Benzo(k)fluoranthene	ug/L	1	0.99	99	60-125	
Chrysene	ug/L	1	0.91	91	67-125	
Dibenz(a,h)anthracene	ug/L	1	1.0	102	60-125	
Fluoranthene	ug/L	1	0.95	95	64-125	
Fluorene	ug/L	1	0.84	84	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.98	98	67-125	
Naphthalene	ug/L	1	0.80	80	53-125	
Phenanthrene	ug/L	1	0.78	78	64-125	
Pyrene	ug/L	1	0.93	93	64-125	
2-Fluorobiphenyl (S)	%			86	58-125	
Terphenyl-d14 (S)	%			90	75-125	

Date: 10/03/2012 01:40 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295969 1295970											
Parameter	Units	10206124006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	36.9	1	1	32.5	31.1	-424	-565	55-125	4	E,M1
Acenaphthylene	ug/L	0.46	1	1	1.2	1.2	75	70	55-125	5	30
Anthracene	ug/L	0.39	1	1	1.3	1.2	88	83	60-125	5	30
Benzo(a)anthracene	ug/L	ND	1	1	0.86	0.83	83	82	55-125	3	30
Benzo(a)pyrene	ug/L	ND	1	1	0.98	0.89	95	87	61-125	9	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.89	0.85	87	83	58-125	5	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.99	0.95	96	93	63-125	4	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.97	0.93	94	92	55-125	4	30
Chrysene	ug/L	ND	1	1	0.89	0.85	86	83	61-125	5	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	1.0	0.97	101	95	60-125	6	30
Fluoranthene	ug/L	0.11	1	1	1.1	1.0	96	91	68-125	6	30
Fluorene	ug/L	6.0	1	1	7.2	7.0	119	104	60-125	2	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.99	0.94	96	92	59-125	5	30
Naphthalene	ug/L	359	1	1	201	182	-15300	-17300	50-125	10	E,M1
Phenanthrene	ug/L	4.6	1	1	5.8	5.6	120	97	63-125	4	30
Pyrene	ug/L	0.050	1	1	0.98	0.94	90	87	57-125	4	30
2-Fluorobiphenyl (S)	%						78	70	58-125		
Terphenyl-d14 (S)	%						87	85	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1295971 1295972											
Parameter	Units	10206394002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.78	0.73	77	72	55-125	7	30
Acenaphthylene	ug/L	ND	1	1	0.74	0.68	73	67	55-125	8	30
Anthracene	ug/L	ND	1	1	0.92	0.87	90	86	60-125	5	30
Benzo(a)anthracene	ug/L	ND	1	1	0.78	0.75	77	74	55-125	5	30
Benzo(a)pyrene	ug/L	ND	1	1	0.93	0.89	91	88	61-125	4	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.81	0.76	80	75	58-125	7	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.95	0.91	94	90	63-125	4	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.97	0.95	95	94	55-125	2	30
Chrysene	ug/L	ND	1	1	0.91	0.84	89	84	61-125	7	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.97	0.93	95	92	60-125	4	30
Fluoranthene	ug/L	ND	1	1	1.0	0.97	100	96	68-125	4	30
Fluorene	ug/L	ND	1	1	0.83	0.77	82	76	60-125	8	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.94	0.90	92	89	59-125	4	30
Naphthalene	ug/L	0.046	1	1	0.74	0.69	68	64	50-125	7	30
Phenanthrene	ug/L	ND	1	1	0.84	0.80	83	80	63-125	5	30
Pyrene	ug/L	ND	1	1	0.90	0.89	88	88	57-125	.6	30
2-Fluorobiphenyl (S)	%						79	72	58-125		
Terphenyl-d14 (S)	%						82	81	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly Site

Pace Project No.: 10206394

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10206394001	0987-0009 W411	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394002	0987-0009 W412	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394003	0987-0009 W18	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394004	0987-0009 W14	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394005	0987-0009 W9	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394006	0987-0009 W130	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394007	0987-0009 W412D	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614
10206394008	0987-0009 W412FB	EPA 3510	OEXT/19795	EPA 8270 by SIM	MSSV/8614


The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Summit Environmental Solutions Address: 1217 Bardana Blvd. Saint Paul, MN Email To: pgregg@summitsolutions.com Phone: 651-262-4476 Requested Due Date/TAT:		Section B Required Project Information: Report To: Bill Gregg Copy To:		Section C Invoice Information: Attention: Kevin McCarson Company Name: Summit Environmental Solutions Address: 1217 Bardana Blvd. Place Quote Reference: Place Project Manager: Place Profile #:	
Section D Required Regulatory Agency Information: Regulatory Agency:		NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		Site Location: MN STATE:	
Page: 1 of 1 1660739					

[illegible]

ORIGINAL		SAMPLER NAME AND SIGNATURE					Temp In °C	Received on (Y/N)	Custody (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Rebecca Eden	9/2/12	16:33	CS pore	9-2-12	16:33	1-4	Y	Y	N	Y
							0-4				

PRINT Name of SAMPLER: Rebecca Eden		DATE Signed (MM/DD/YY): 9/2/12	
SIGNATURE of SAMPLER: Rebecca Eden			

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Summit Environmental Solutions

Project #:

WO#: 10206394

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client
☒ Commercial ☐ Pace ☐ Other: _____



Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No

Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____

Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 888A912167504 ☐ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: *14.04* Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents: *[Signature]*

Temp should be above freezing to 6°C

Comments: *9.21.12*

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <i>WT</i>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: *[Signature]*

Date: *9/24/12*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 11, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report was revised to correct the sample IDs on samples labeled W24 to W424 per request of the client.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10206439001	0987-09 W424	Water	09/24/12 08:48	09/24/12 17:50
10206439002	0987-09 W424D	Water	09/24/12 08:48	09/24/12 17:50
10206439003	0987-09 W424 FB	Water	09/24/12 08:48	09/24/12 17:50
10206439004	0987-09 W414	Water	09/24/12 11:41	09/24/12 17:50
10206439005	0987-09 W409	Water	09/24/12 13:23	09/24/12 17:50
10206439006	0987-09 W33R	Water	09/24/12 14:34	09/24/12 17:50
10206439007	0987-09 W27	Water	09/24/12 16:33	09/24/12 17:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10206439001	0987-09 W424	EPA 8270 by SIM	DRE	18
10206439002	0987-09 W424D	EPA 8270 by SIM	DRE	18
10206439003	0987-09 W424 FB	EPA 8270 by SIM	DRE	18
10206439004	0987-09 W414	EPA 8270 by SIM	DRE	18
10206439005	0987-09 W409	EPA 8270 by SIM	DRE	18
10206439006	0987-09 W33R	EPA 8270 by SIM	DRE	18
10206439007	0987-09 W27	EPA 8270 by SIM	DRE	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W424		Lab ID: 10206439001		Collected: 09/24/12 08:48		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	10/01/12 07:22	10/03/12 17:04	83-32-9	M1
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 17:04	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/01/12 07:22	10/03/12 17:04	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 17:04	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/03/12 17:04	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/03/12 17:04	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81	%	58-125		1	10/01/12 07:22	10/03/12 17:04	321-60-8	
Terphenyl-d14 (S)	90	%	75-125		1	10/01/12 07:22	10/03/12 17:04	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W424D		Lab ID: 10206439002		Collected: 09/24/12 08:48		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.041	0.0052	1	10/01/12 07:22	10/03/12 18:08	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 18:08	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	207-08-9	
Chrysene	ND	ug/L	0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	10/01/12 07:22	10/03/12 18:08	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	10/01/12 07:22	10/03/12 18:08	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	10/01/12 07:22	10/03/12 18:08	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	85 %		58-125		1	10/01/12 07:22	10/03/12 18:08	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/03/12 18:08	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W424 FB		Lab ID: 10206439003	Collected: 09/24/12 08:48	Received: 09/24/12 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.043	0.0054	1	10/01/12 07:22	10/03/12 18:30	83-32-9	
Acenaphthylene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 18:30	208-96-8	
Anthracene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	120-12-7	
Benzo(a)anthracene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	207-08-9	
Chrysene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	53-70-3	
Fluoranthene	ND ug/L		0.043	0.013	1	10/01/12 07:22	10/03/12 18:30	206-44-0	
Fluorene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 18:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	193-39-5	
Naphthalene	ND ug/L		0.043	0.0065	1	10/01/12 07:22	10/03/12 18:30	91-20-3	
Phenanthrene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	85-01-8	
Pyrene	ND ug/L		0.043	0.014	1	10/01/12 07:22	10/03/12 18:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	80 %		58-125		1	10/01/12 07:22	10/03/12 18:30	321-60-8	
Terphenyl-d14 (S)	94 %		75-125		1	10/01/12 07:22	10/03/12 18:30	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W414		Lab ID: 10206439004		Collected: 09/24/12 11:41		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	10/01/12 07:22	10/03/12 18:51	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 18:51	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	10/01/12 07:22	10/03/12 18:51	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 18:51	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/03/12 18:51	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/03/12 18:51	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77 %		58-125		1	10/01/12 07:22	10/03/12 18:51	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/03/12 18:51	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W409		Lab ID: 10206439005	Collected: 09/24/12 13:23	Received: 09/24/12 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	3.2	ug/L	0.041	0.0051	1	10/01/12 07:22	10/03/12 19:13	83-32-9	
Acenaphthylene	0.64	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 19:13	208-96-8	
Anthracene	0.30	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	53-70-3	
Fluoranthene	0.32	ug/L	0.041	0.012	1	10/01/12 07:22	10/03/12 19:13	206-44-0	
Fluorene	1.7	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 19:13	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	193-39-5	
Naphthalene	0.041	ug/L	0.041	0.0062	1	10/01/12 07:22	10/03/12 19:13	91-20-3	
Phenanthrene	1.9	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	85-01-8	
Pyrene	0.25	ug/L	0.041	0.013	1	10/01/12 07:22	10/03/12 19:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81	%	58-125		1	10/01/12 07:22	10/03/12 19:13	321-60-8	
Terphenyl-d14 (S)	90	%	75-125		1	10/01/12 07:22	10/03/12 19:13	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W33R		Lab ID: 10206439006		Collected: 09/24/12 14:34		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	10/01/12 07:22	10/03/12 19:34	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 19:34	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/01/12 07:22	10/03/12 19:34	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 19:34	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/03/12 19:34	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/03/12 19:34	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	10/01/12 07:22	10/03/12 19:34	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	10/01/12 07:22	10/03/12 19:34	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Sample: 0987-09 W27		Lab ID: 10206439007		Collected: 09/24/12 16:33		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	38.0	ug/L	0.42	0.053	10	10/01/12 07:22	10/04/12 14:05	83-32-9	
Acenaphthylene	1.1	ug/L	0.042	0.0042	1	10/01/12 07:22	10/03/12 19:56	208-96-8	
Anthracene	1.1	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	53-70-3	
Fluoranthene	0.89	ug/L	0.042	0.013	1	10/01/12 07:22	10/03/12 19:56	206-44-0	
Fluorene	22.2	ug/L	0.42	0.042	10	10/01/12 07:22	10/04/12 14:05	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	193-39-5	
Naphthalene	0.17	ug/L	0.042	0.0063	1	10/01/12 07:22	10/03/12 19:56	91-20-3	
Phenanthrene	0.25	ug/L	0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	85-01-8	
Pyrene	0.49	ug/L	0.042	0.014	1	10/01/12 07:22	10/03/12 19:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76	%	58-125		1	10/01/12 07:22	10/03/12 19:56	321-60-8	
Terphenyl-d14 (S)	88	%	75-125		1	10/01/12 07:22	10/03/12 19:56	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

QC Batch:	OEXT/19835	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by SIM MSSV
Associated Lab Samples:	10206439001, 10206439002, 10206439003, 10206439004, 10206439005, 10206439006, 10206439007		
METHOD BLANK:	1299243	Matrix:	Water
Associated Lab Samples:	10206439001, 10206439002, 10206439003, 10206439004, 10206439005, 10206439006, 10206439007		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	10/04/12 10:38	
Acenaphthylene	ug/L	ND	0.040	10/04/12 10:38	
Anthracene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(a)anthracene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(a)pyrene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(b)fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(g,h,i)perylene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(k)fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Chrysene	ug/L	ND	0.040	10/04/12 10:38	
Dibenz(a,h)anthracene	ug/L	ND	0.040	10/04/12 10:38	
Fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Fluorene	ug/L	ND	0.040	10/04/12 10:38	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	10/04/12 10:38	
Naphthalene	ug/L	ND	0.040	10/04/12 10:38	
Phenanthrene	ug/L	ND	0.040	10/04/12 10:38	
Pyrene	ug/L	ND	0.040	10/04/12 10:38	
2-Fluorobiphenyl (S)	%	76	58-125	10/04/12 10:38	
Terphenyl-d14 (S)	%	89	75-125	10/04/12 10:38	

LABORATORY CONTROL SAMPLE: 1299244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.69	69	56-125	
Acenaphthylene	ug/L	1	0.57	57	55-125	
Anthracene	ug/L	1	0.64	64	63-125	
Benzo(a)anthracene	ug/L	1	0.65	65	61-125	
Benzo(a)pyrene	ug/L	1	0.80	80	67-125	
Benzo(b)fluoranthene	ug/L	1	0.82	82	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.81	81	68-125	
Benzo(k)fluoranthene	ug/L	1	0.83	83	60-125	
Chrysene	ug/L	1	0.83	83	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.82	82	60-125	
Fluoranthene	ug/L	1	0.75	75	64-125	
Fluorene	ug/L	1	0.70	70	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.80	80	67-125	
Naphthalene	ug/L	1	0.69	69	53-125	
Phenanthrene	ug/L	1	0.79	79	64-125	
Pyrene	ug/L	1	0.80	80	64-125	
2-Fluorobiphenyl (S)	%			79	58-125	
Terphenyl-d14 (S)	%			92	75-125	

Date: 10/11/2012 11:00 AM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1299245 1299246											
Parameter	Units	10206439001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.70	0.69	68	67	55-125	.9	30
Acenaphthylene	ug/L	ND	1	1	0.56	0.54	55	52	55-125	4	30 M1
Anthracene	ug/L	ND	1	1	0.70	0.67	68	65	60-125	4	30
Benzo(a)anthracene	ug/L	ND	1	1	0.70	0.64	69	62	55-125	10	30
Benzo(a)pyrene	ug/L	ND	1	1	0.80	0.76	79	73	61-125	6	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.84	0.81	83	78	58-125	4	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.76	0.77	75	75	63-125	1	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.74	0.80	72	77	55-125	8	30
Chrysene	ug/L	ND	1	1	0.76	0.79	75	77	61-125	4	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.79	0.78	77	76	60-125	.7	30
Fluoranthene	ug/L	ND	1	1	0.79	0.74	77	71	68-125	7	30
Fluorene	ug/L	ND	1	1	0.70	0.71	69	69	60-125	1	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.78	0.77	76	74	59-125	2	30
Naphthalene	ug/L	ND	1	1	0.69	0.66	67	64	50-125	4	30
Phenanthrene	ug/L	ND	1	1	0.80	0.80	78	77	63-125	.02	30
Pyrene	ug/L	ND	1	1	0.81	0.76	79	74	57-125	6	30
2-Fluorobiphenyl (S)	%						72	74	58-125		
Terphenyl-d14 (S)	%						86	85	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1299247 1299248											
Parameter	Units	10206600002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	1.2	1.1	1.1	2.1	1.8	82	62	55-125	11	30
Acenaphthylene	ug/L	ND	1.1	1.1	0.65	0.55	61	53	55-125	16	30 M1
Anthracene	ug/L	ND	1.1	1.1	0.73	0.60	69	57	60-125	20	30 M1
Benzo(a)anthracene	ug/L	ND	1.1	1.1	0.74	0.61	70	58	55-125	20	30
Benzo(a)pyrene	ug/L	ND	1.1	1.1	0.85	0.71	80	67	61-125	19	30
Benzo(b)fluoranthene	ug/L	ND	1.1	1.1	0.90	0.74	84	71	58-125	19	30
Benzo(g,h,i)perylene	ug/L	ND	1.1	1.1	0.84	0.72	79	69	63-125	15	30
Benzo(k)fluoranthene	ug/L	ND	1.1	1.1	0.86	0.74	81	71	55-125	15	30
Chrysene	ug/L	ND	1.1	1.1	0.84	0.73	79	69	61-125	15	30
Dibenz(a,h)anthracene	ug/L	ND	1.1	1.1	0.86	0.72	81	69	60-125	17	30
Fluoranthene	ug/L	ND	1.1	1.1	0.83	0.69	78	65	68-125	18	30 M1
Fluorene	ug/L	ND	1.1	1.1	0.78	0.66	73	63	60-125	17	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.1	1.1	0.84	0.72	79	68	59-125	15	30
Naphthalene	ug/L	ND	1.1	1.1	0.75	0.64	71	61	50-125	16	30
Phenanthrene	ug/L	ND	1.1	1.1	0.84	0.72	79	68	63-125	15	30
Pyrene	ug/L	ND	1.1	1.1	0.86	0.73	81	69	57-125	17	30
2-Fluorobiphenyl (S)	%						76	70	58-125		
Terphenyl-d14 (S)	%						88	77	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS


M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly Site -REV

Pace Project No.: 10206439

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10206439001	0987-09 W424	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439002	0987-09 W424D	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439003	0987-09 W424 FB	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439004	0987-09 W414	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439005	0987-09 W409	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439006	0987-09 W33R	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206439007	0987-09 W27	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10206439

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other:



Tracking Number:

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No
Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No
Thermometer Used: ☒ 88A912167504 ☐ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun
Cooler Temperature: 0.4/0.8 Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents:
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix:		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, Collform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted:

Date/Time:

Comments/Resolution:

Project Manager Review:

Date:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of temp, incorrect preservative, out of temp, incorrect containers)

February 28, 2013

Mr. William Gregg
Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Re: Data Package Review Report – Pace Analytical SDG# 10206439 – PAHs in Water

Dear Mr. Gregg:

The evaluation of the semi-volatile organic (PAH) analytical data for seven water samples prepared by Pace Analytical in Minneapolis, MN from the Reilly N.P.L. Site, which was reported under Sample Delivery Group (SDG) #10206439 has been completed. The hard copy data package reported the following samples:

0987-09 W424	0987-09 W424D	0987-09 W424 FB
0987-09 W414	0987-09 W409	0987-09 W33R
0987-09 W27		

Analysis was performed in accordance with USEPA SW-846 Method 8270C SIM. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

Based on the evaluation effort, the data were qualified as follows:

- Acenaphthylene, Acenaphthene and Fluoranthene in all field samples were qualified as estimated (L,UJ) due to low MS/MSD recoveries.

The laboratory results forms are included as Attachment A to this report. Qualifier definitions are also provided in this attachment. A copy of the chain of custody record is provided in Attachment B.

Specific details regarding the review and evaluation of these data are discussed below:

Holding Times, Preservation, Sample Integrity: A copy of the applicable chain of custody (COC) record was included in the data package, documenting a collection date of September 24, 2012, for the field sample. The samples were received by the laboratory on September 24, 2012. The temperatures of the coolers upon receipt at the

laboratory were noted on the COC and were acceptable (0.4 and 0.8° C). The samples were extracted on October 1, 2012, and analyzed on October 3 and 4, 2012, meeting extraction and analysis holding times.

GC/MS Instrument Performance Check: Summary forms were provided for three decafluorotriphenylphosphine (DFTPP) instrument performance checks run on instrument "10mssA", reflecting each 12-hour period during which samples, calibrations standards, and associated quality control samples were analyzed. Reported relative abundances for each of the performance checks were acceptable.

Calibration: Summary results for one initial calibration (IC) were reported in support of the sample analysis. Eight standards, at concentrations ranging from 0.02 µg/ml to 10µg/ml, were run for all target analytes. Although the standards included more compounds than were specifically applicable to these analyses, all project-specified target analytes were included on the IC summary form. For the relevant target analytes, reported average relative response factors (RRFs) were greater than the evaluation criterion (0.05). Percent relative standard deviations (%RSDs) were acceptable.

Summary forms were provided for two continuing calibration (CC) standards. Reported RRFs were acceptable (greater than 0.05). Reported percent differences (%Ds) from the applicable IC were less than the method-specified acceptance criterion (20%D).

Blanks: Results for one method blank and one field blank associated with the site sample analysis were provided by the laboratory. No target analytes were detected in either blank.

Surrogates: Surrogate recoveries were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses were performed on 0987-09 W24. All percent recoveries (%R) were acceptable with the exception of Acenaphthylene (52%, 53%R), Acenaphthene (57%R in MSD) and Fluoranthene (65% in MSD) . Acenaphthylene, Acenaphthene and Fluoranthene in all field samples were qualified as estimated (L,UJ) on this basis.

Laboratory Control Samples (LCS): Results for one LCS were reported in the data package. All recoveries were acceptable.

Field Duplicate: 0987-09W424D was collected as a field duplicate of 0987-09 W424. No target analytes were detected in either of the paired samples.

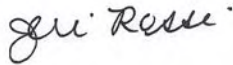
Internal Standard Responses: Internal Standard area responses were acceptable.

Sample Results: Target analytes were detected in 0987-09 W409 and 0987-09 W27. Acceptable ion chromatograms were provided for each reported target analyte.

Documentation: No documentation issues were observed during the data review effort.

Please feel free to contact me if you have any questions regarding this data package review report.

Sincerely,

A handwritten signature in black ink that reads "Jeri Rossi". The signature is written in a cursive, flowing style.

Jeri Rossi
Sr. Environmental Chemist

Attachments

ATTACHMENT A

LABORATORY RESULTS FORMS
Laboratory Job No. 1020436

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W424		Lab ID: 10206439001		Collected: 09/24/12 08:48		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L	UJ	0.042	0.0052	1	10/01/12 07:22	10/03/12 17:04	83-32-9	M1
Acenaphthylene	ND ug/L	UJ	0.042	0.0042	1	10/01/12 07:22	10/03/12 17:04	208-96-8	
Anthracene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	207-08-9	
Chrysene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 17:04	53-70-3	
Fluoranthene	ND ug/L	UJ	0.042	0.012	1	10/01/12 07:22	10/03/12 17:04	206-44-0	
Fluorene	ND ug/L		0.042	0.0042	1	10/01/12 07:22	10/03/12 17:04	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 17:04	193-39-5	
Naphthalene	ND ug/L		0.042	0.0063	1	10/01/12 07:22	10/03/12 17:04	91-20-3	
Phenanthrene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 17:04	85-01-8	
Pyrene	ND ug/L		0.042	0.014	1	10/01/12 07:22	10/03/12 17:04	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	10/01/12 07:22	10/03/12 17:04	321-60-8	
Terphenyl-d14 (S)	90 %		75-125		1	10/01/12 07:22	10/03/12 17:04	1718-51-0	

Date: 10/11/2012 11:00 AM

REPORT OF LABORATORY ANALYSIS

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Jim Rossi
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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W424D		Lab ID: 10206439002		Collected: 09/24/12 08:48		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L	ug/L	0.041	0.0052	1	10/01/12 07:22	10/03/12 18:08	83-32-9	
Acenaphthylene	ND ug/L	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 18:08	208-96-8	
Anthracene	ND ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	120-12-7	
Benzo(a)anthracene	ND ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	56-55-3	
Benzo(a)pyrene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	207-08-9	
Chrysene	ND ug/L		0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.041	0.0093	1	10/01/12 07:22	10/03/12 18:08	53-70-3	
Fluoranthene	ND ug/L	ug/L	0.041	0.012	1	10/01/12 07:22	10/03/12 18:08	206-44-0	
Fluorene	ND ug/L		0.041	0.0041	1	10/01/12 07:22	10/03/12 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 18:08	193-39-5	
Naphthalene	ND ug/L		0.041	0.0062	1	10/01/12 07:22	10/03/12 18:08	91-20-3	
Phenanthrene	ND ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 18:08	85-01-8	
Pyrene	ND ug/L		0.041	0.013	1	10/01/12 07:22	10/03/12 18:08	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	85 %		58-125		1	10/01/12 07:22	10/03/12 18:08	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/03/12 18:08	1718-51-0	

Gu Rose
2/13/13

Date: 10/11/2012 11:00 AM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W424 FB Lab ID: 10206439003 Collected: 09/24/12 08:48 Received: 09/24/12 17:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510									
Acenaphthene	ND	ug/L	0.043	0.0054	1	10/01/12 07:22	10/03/12 18:30	83-32-9	
Acenaphthylene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/03/12 18:30	208-96-8	
Anthracene	ND	ug/L	0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	207-08-9	
Chrysene	ND	ug/L	0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0098	1	10/01/12 07:22	10/03/12 18:30	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	10/01/12 07:22	10/03/12 18:30	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/03/12 18:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/03/12 18:30	193-39-5	
Naphthalene	ND	ug/L	0.043	0.0065	1	10/01/12 07:22	10/03/12 18:30	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0087	1	10/01/12 07:22	10/03/12 18:30	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	10/01/12 07:22	10/03/12 18:30	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	80 %		58-125		1	10/01/12 07:22	10/03/12 18:30	321-60-8	
Terphenyl-d14 (S)	94 %		75-125		1	10/01/12 07:22	10/03/12 18:30	1718-51-0	

Date: 10/11/2012 11:00 AM

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W414		Lab ID: 10206439004		Collected: 09/24/12 11:41		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L	UJ	0.042	0.0053	1	10/01/12 07:22	10/03/12 18:51	83-32-9	
Acenaphthylene	ND ug/L	UJ	0.042	0.0042	1	10/01/12 07:22	10/03/12 18:51	208-96-8	
Anthracene	ND ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	207-08-9	
Chrysene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 18:51	53-70-3	
Fluoranthene	ND ug/L	UJ	0.042	0.013	1	10/01/12 07:22	10/03/12 18:51	206-44-0	
Fluorene	ND ug/L		0.042	0.0042	1	10/01/12 07:22	10/03/12 18:51	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 18:51	193-39-5	
Naphthalene	ND ug/L		0.042	0.0063	1	10/01/12 07:22	10/03/12 18:51	91-20-3	
Phenanthrene	ND ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 18:51	85-01-8	
Pyrene	ND ug/L		0.042	0.014	1	10/01/12 07:22	10/03/12 18:51	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77 %		58-125		1	10/01/12 07:22	10/03/12 18:51	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/03/12 18:51	1718-51-0	

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W409		Lab ID: 10206439005		Collected: 09/24/12 13:23		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510									
Acenaphthene	3.2 ug/L	L	0.041	0.0051	1	10/01/12 07:22	10/03/12 19:13	83-32-9	
Acenaphthylene	0.64 ug/L	L	0.041	0.0041	1	10/01/12 07:22	10/03/12 19:13	208-96-8	
Anthracene	0.30 ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	120-12-7	
Benzo(a)anthracene	ND ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	56-55-3	
Benzo(a)pyrene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	207-08-9	
Chrysene	ND ug/L		0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.041	0.0092	1	10/01/12 07:22	10/03/12 19:13	53-70-3	
Fluoranthene	0.32 ug/L	L	0.041	0.012	1	10/01/12 07:22	10/03/12 19:13	206-44-0	
Fluorene	1.7 ug/L		0.041	0.0041	1	10/01/12 07:22	10/03/12 19:13	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.041	0.010	1	10/01/12 07:22	10/03/12 19:13	193-39-5	
Naphthalene	0.041 ug/L		0.041	0.0062	1	10/01/12 07:22	10/03/12 19:13	91-20-3	
Phenanthrene	1.9 ug/L		0.041	0.0082	1	10/01/12 07:22	10/03/12 19:13	85-01-8	
Pyrene	0.25 ug/L		0.041	0.013	1	10/01/12 07:22	10/03/12 19:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	10/01/12 07:22	10/03/12 19:13	321-60-8	
Terphenyl-d14 (S)	90 %		75-125		1	10/01/12 07:22	10/03/12 19:13	1718-51-0	

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W33R		Lab ID: 10206439006	Collected: 09/24/12 14:34	Received: 09/24/12 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L <i>u5</i>		0.042	0.0052	1	10/01/12 07:22	10/03/12 19:34	83-32-9	
Acenaphthylene	ND ug/L <i>u5</i>		0.042	0.0042	1	10/01/12 07:22	10/03/12 19:34	208-96-8	
Anthracene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	207-08-9	
Chrysene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0094	1	10/01/12 07:22	10/03/12 19:34	53-70-3	
Fluoranthene	ND ug/L <i>u5</i>		0.042	0.012	1	10/01/12 07:22	10/03/12 19:34	206-44-0	
Fluorene	ND ug/L		0.042	0.0042	1	10/01/12 07:22	10/03/12 19:34	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.010	1	10/01/12 07:22	10/03/12 19:34	193-39-5	
Naphthalene	ND ug/L		0.042	0.0063	1	10/01/12 07:22	10/03/12 19:34	91-20-3	
Phenanthrene	ND ug/L		0.042	0.0083	1	10/01/12 07:22	10/03/12 19:34	85-01-8	
Pyrene	ND ug/L		0.042	0.014	1	10/01/12 07:22	10/03/12 19:34	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	10/01/12 07:22	10/03/12 19:34	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	10/01/12 07:22	10/03/12 19:34	1718-51-0	

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly Site -REV
Pace Project No.: 10206439

Sample: 0987-09 W27		Lab ID: 10206439007		Collected: 09/24/12 16:33		Received: 09/24/12 17:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	38.0 ug/L	L	0.42	0.053	10	10/01/12 07:22	10/04/12 14:05	83-32-9	
Acenaphthylene	1.1 ug/L	L	0.042	0.0042	1	10/01/12 07:22	10/03/12 19:56	208-96-8	
Anthracene	1.1 ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	120-12-7	
Benzo(a)anthracene	ND ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	56-55-3	
Benzo(a)pyrene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	207-08-9	
Chrysene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.042	0.0095	1	10/01/12 07:22	10/03/12 19:56	53-70-3	
Fluoranthene	0.89 ug/L	L	0.042	0.013	1	10/01/12 07:22	10/03/12 19:56	206-44-0	
Fluorene	22.2 ug/L		0.42	0.042	10	10/01/12 07:22	10/04/12 14:05	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.042	0.011	1	10/01/12 07:22	10/03/12 19:56	193-39-5	
Naphthalene	0.17 ug/L		0.042	0.0063	1	10/01/12 07:22	10/03/12 19:56	91-20-3	
Phenanthrene	0.25 ug/L		0.042	0.0084	1	10/01/12 07:22	10/03/12 19:56	85-01-8	
Pyrene	0.49 ug/L		0.042	0.014	1	10/01/12 07:22	10/03/12 19:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76 %		58-125		1	10/01/12 07:22	10/03/12 19:56	321-60-8	
Terphenyl-d14 (S)	88 %		75-125		1	10/01/12 07:22	10/03/12 19:56	1718-51-0	

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Date: 10/11/2012 11:00 AM

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EPA Region 5 Guidelines Qualifier Definitions

- U =** The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J =** The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K =** The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L =** The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI =** This flag applies when an compound has matrix interferences.
- N =** The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ=** The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ=** The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R=** The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

ATTACHMENT B

CHAIN OF CUSTODY RECORD
Laboratory Job No. 10206439

October 08, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly
Pace Project No.: 10206600

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 25, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10206600001	0987-09 W422	Water	09/25/12 07:50	09/25/12 17:21
10206600002	0987-09 W434	Water	09/25/12 08:21	09/25/12 12:17
10206600003	0987-09 W434 D	Water	09/25/12 08:21	09/25/12 17:21
10206600004	0987-09 W434 FB	Water	09/25/12 08:21	09/25/12 17:21
10206600005	0987-09 P312	Water	09/25/12 08:41	09/25/12 17:21
10206600006	0987-09 P310	Water	09/25/12 10:31	09/25/12 17:21
10206600007	0987-09 P309	Water	09/25/12 09:49	09/25/12 17:21
10206600008	0987-09 W2	Water	09/25/12 12:40	09/25/12 17:21
10206600009	0987-09 W15	Water	09/25/12 16:11	09/25/12 17:21
10206600010	0987-09 W10	Water	09/25/12 14:12	09/25/12 17:21
10206600011	0987-09 W408	Water	09/25/12 15:15	09/25/12 17:21
10206600012	0987-09 W438	Water	09/25/12 11:18	09/25/12 17:21

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10206600001	0987-09 W422	EPA 8270 by SIM	DRE	18
10206600002	0987-09 W434	EPA 8270 by SIM	DRE	18
10206600003	0987-09 W434 D	EPA 8270 by SIM	DRE	18
10206600004	0987-09 W434 FB	EPA 8270 by SIM	DRE	18
10206600005	0987-09 P312	EPA 8270 by SIM	DRE	18
10206600006	0987-09 P310	EPA 8270 by SIM	DRE	18
10206600007	0987-09 P309	EPA 8270 by SIM	DRE	18
10206600008	0987-09 W2	EPA 8270 by SIM	DRE	18
10206600009	0987-09 W15	EPA 8270 by SIM	DRE	18
10206600010	0987-09 W10	EPA 8270 by SIM	DRE	18
10206600011	0987-09 W408	EPA 8270 by SIM	DRE	18
10206600012	0987-09 W438	EPA 8270 by SIM	DRE	18

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W422		Lab ID: 10206600001		Collected: 09/25/12 07:50		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	12.5	ug/L	0.21	0.026	5	10/01/12 07:22	10/04/12 14:25	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 20:17	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 20:17	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 20:17	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 20:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 20:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 20:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 20:17	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 20:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/03/12 20:17	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	10/01/12 07:22	10/03/12 20:17	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/03/12 20:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/03/12 20:17	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0062	1	10/01/12 07:22	10/03/12 20:17	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/03/12 20:17	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	10/01/12 07:22	10/03/12 20:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76	%	58-125		1	10/01/12 07:22	10/03/12 20:17	321-60-8	
Terphenyl-d14 (S)	86	%	75-125		1	10/01/12 07:22	10/03/12 20:17	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W434		Lab ID: 10206600002		Collected: 09/25/12 08:21		Received: 09/25/12 12:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	1.2 ug/L		0.043	0.0053	1	10/01/12 07:22	10/03/12 20:39	83-32-9	
Acenaphthylene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 20:39	208-96-8	M1
Anthracene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 20:39	120-12-7	M1
Benzo(a)anthracene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 20:39	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 20:39	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 20:39	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 20:39	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 20:39	207-08-9	
Chrysene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 20:39	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 20:39	53-70-3	
Fluoranthene	ND ug/L		0.043	0.013	1	10/01/12 07:22	10/03/12 20:39	206-44-0	M1
Fluorene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 20:39	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 20:39	193-39-5	
Naphthalene	ND ug/L		0.043	0.0064	1	10/01/12 07:22	10/03/12 20:39	91-20-3	
Phenanthrene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 20:39	85-01-8	
Pyrene	ND ug/L		0.043	0.014	1	10/01/12 07:22	10/03/12 20:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73 %		58-125		1	10/01/12 07:22	10/03/12 20:39	321-60-8	
Terphenyl-d14 (S)	81 %		75-125		1	10/01/12 07:22	10/03/12 20:39	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W434 D		Lab ID: 10206600003		Collected: 09/25/12 08:21		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	1.3 ug/L		0.043	0.0053	1	10/01/12 07:22	10/03/12 21:43	83-32-9	
Acenaphthylene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 21:43	208-96-8	
Anthracene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 21:43	120-12-7	
Benzo(a)anthracene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 21:43	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 21:43	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 21:43	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 21:43	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 21:43	207-08-9	
Chrysene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 21:43	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0096	1	10/01/12 07:22	10/03/12 21:43	53-70-3	
Fluoranthene	ND ug/L		0.043	0.013	1	10/01/12 07:22	10/03/12 21:43	206-44-0	
Fluorene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/03/12 21:43	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/03/12 21:43	193-39-5	
Naphthalene	ND ug/L		0.043	0.0064	1	10/01/12 07:22	10/03/12 21:43	91-20-3	
Phenanthrene	ND ug/L		0.043	0.0085	1	10/01/12 07:22	10/03/12 21:43	85-01-8	
Pyrene	ND ug/L		0.043	0.014	1	10/01/12 07:22	10/03/12 21:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78 %		58-125		1	10/01/12 07:22	10/03/12 21:43	321-60-8	
Terphenyl-d14 (S)	93 %		75-125		1	10/01/12 07:22	10/03/12 21:43	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W434 FB		Lab ID: 10206600004	Collected: 09/25/12 08:21	Received: 09/25/12 17:21	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.043	0.0054	1	10/01/12 07:22	10/04/12 15:48	83-32-9	
Acenaphthylene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/04/12 15:48	208-96-8	
Anthracene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/04/12 15:48	120-12-7	
Benzo(a)anthracene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/04/12 15:48	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/04/12 15:48	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/04/12 15:48	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/04/12 15:48	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/04/12 15:48	207-08-9	
Chrysene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/04/12 15:48	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0098	1	10/01/12 07:22	10/04/12 15:48	53-70-3	
Fluoranthene	ND ug/L		0.043	0.013	1	10/01/12 07:22	10/04/12 15:48	206-44-0	
Fluorene	ND ug/L		0.043	0.0043	1	10/01/12 07:22	10/04/12 15:48	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	10/01/12 07:22	10/04/12 15:48	193-39-5	
Naphthalene	ND ug/L		0.043	0.0065	1	10/01/12 07:22	10/04/12 15:48	91-20-3	
Phenanthrene	ND ug/L		0.043	0.0087	1	10/01/12 07:22	10/04/12 15:48	85-01-8	
Pyrene	ND ug/L		0.043	0.014	1	10/01/12 07:22	10/04/12 15:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	81 %		58-125		1	10/01/12 07:22	10/04/12 15:48	321-60-8	
Terphenyl-d14 (S)	95 %		75-125		1	10/01/12 07:22	10/04/12 15:48	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 P312		Lab ID: 10206600005		Collected: 09/25/12 08:41		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.80	ug/L	0.041	0.0051	1	10/01/12 07:22	10/04/12 11:19	83-32-9	
Acenaphthylene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/04/12 11:19	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/04/12 11:19	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/04/12 11:19	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/04/12 11:19	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/04/12 11:19	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/04/12 11:19	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/04/12 11:19	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/04/12 11:19	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	10/01/12 07:22	10/04/12 11:19	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	10/01/12 07:22	10/04/12 11:19	206-44-0	
Fluorene	ND	ug/L	0.041	0.0041	1	10/01/12 07:22	10/04/12 11:19	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/01/12 07:22	10/04/12 11:19	193-39-5	
Naphthalene	ND	ug/L	0.041	0.0061	1	10/01/12 07:22	10/04/12 11:19	91-20-3	
Phenanthrene	ND	ug/L	0.041	0.0082	1	10/01/12 07:22	10/04/12 11:19	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	10/01/12 07:22	10/04/12 11:19	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77	%	58-125		1	10/01/12 07:22	10/04/12 11:19	321-60-8	
Terphenyl-d14 (S)	86	%	75-125		1	10/01/12 07:22	10/04/12 11:19	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 P310		Lab ID: 10206600006		Collected: 09/25/12 10:31		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.74	ug/L	0.042	0.0053	1	10/01/12 07:22	10/04/12 11:40	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 11:40	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 11:40	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 11:40	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 11:40	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 11:40	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 11:40	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 11:40	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 11:40	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 11:40	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	10/01/12 07:22	10/04/12 11:40	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 11:40	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 11:40	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/04/12 11:40	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 11:40	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/04/12 11:40	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	83 %		58-125		1	10/01/12 07:22	10/04/12 11:40	321-60-8	
Terphenyl-d14 (S)	94 %		75-125		1	10/01/12 07:22	10/04/12 11:40	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 P309		Lab ID: 10206600007		Collected: 09/25/12 09:49		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	11.9	ug/L	0.21	0.026	5	10/01/12 07:22	10/04/12 16:36	83-32-9	
Acenaphthylene	0.097	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:00	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:00	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:00	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:00	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:00	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:00	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:00	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:00	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:00	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/01/12 07:22	10/04/12 12:00	206-44-0	
Fluorene	0.41	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:00	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:00	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/04/12 12:00	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:00	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/04/12 12:00	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	80	%	58-125		1	10/01/12 07:22	10/04/12 12:00	321-60-8	
Terphenyl-d14 (S)	93	%	75-125		1	10/01/12 07:22	10/04/12 12:00	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W2		Lab ID: 10206600008		Collected: 09/25/12 12:40		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	10/01/12 07:22	10/04/12 12:21	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:21	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 12:21	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 12:21	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 12:21	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 12:21	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 12:21	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 12:21	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 12:21	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/01/12 07:22	10/04/12 12:21	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	10/01/12 07:22	10/04/12 12:21	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:21	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/01/12 07:22	10/04/12 12:21	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/04/12 12:21	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	10/01/12 07:22	10/04/12 12:21	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/04/12 12:21	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75 %		58-125		1	10/01/12 07:22	10/04/12 12:21	321-60-8	
Terphenyl-d14 (S)	85 %		75-125		1	10/01/12 07:22	10/04/12 12:21	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W15		Lab ID: 10206600009		Collected: 09/25/12 16:11		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	10/01/12 07:22	10/04/12 12:42	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:42	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:42	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:42	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:42	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:42	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:42	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 12:42	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/01/12 07:22	10/04/12 12:42	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 12:42	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 12:42	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/04/12 12:42	91-20-3	
Phenanthrene	0.044	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 12:42	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/04/12 12:42	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71 %		58-125		1	10/01/12 07:22	10/04/12 12:42	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	10/01/12 07:22	10/04/12 12:42	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W10		Lab ID: 10206600010		Collected: 09/25/12 14:12		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.043	0.0053	1	10/01/12 07:22	10/04/12 13:02	83-32-9	
Acenaphthylene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/04/12 13:02	208-96-8	
Anthracene	ND	ug/L	0.043	0.0085	1	10/01/12 07:22	10/04/12 13:02	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0085	1	10/01/12 07:22	10/04/12 13:02	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0096	1	10/01/12 07:22	10/04/12 13:02	207-08-9	
Chrysene	ND	ug/L	0.043	0.0096	1	10/01/12 07:22	10/04/12 13:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0096	1	10/01/12 07:22	10/04/12 13:02	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	10/01/12 07:22	10/04/12 13:02	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/04/12 13:02	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:02	193-39-5	
Naphthalene	0.044	ug/L	0.043	0.0064	1	10/01/12 07:22	10/04/12 13:02	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0085	1	10/01/12 07:22	10/04/12 13:02	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	10/01/12 07:22	10/04/12 13:02	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68 %		58-125		1	10/01/12 07:22	10/04/12 13:02	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/04/12 13:02	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W408		Lab ID: 10206600011		Collected: 09/25/12 15:15		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.043	0.0054	1	10/01/12 07:22	10/04/12 13:23	83-32-9	
Acenaphthylene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/04/12 13:23	208-96-8	
Anthracene	ND	ug/L	0.043	0.0086	1	10/01/12 07:22	10/04/12 13:23	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0086	1	10/01/12 07:22	10/04/12 13:23	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:23	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:23	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:23	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0097	1	10/01/12 07:22	10/04/12 13:23	207-08-9	
Chrysene	ND	ug/L	0.043	0.0097	1	10/01/12 07:22	10/04/12 13:23	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0097	1	10/01/12 07:22	10/04/12 13:23	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	10/01/12 07:22	10/04/12 13:23	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	10/01/12 07:22	10/04/12 13:23	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	10/01/12 07:22	10/04/12 13:23	193-39-5	
Naphthalene	ND	ug/L	0.043	0.0065	1	10/01/12 07:22	10/04/12 13:23	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0086	1	10/01/12 07:22	10/04/12 13:23	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	10/01/12 07:22	10/04/12 13:23	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	66 %		58-125		1	10/01/12 07:22	10/04/12 13:23	321-60-8	
Terphenyl-d14 (S)	89 %		75-125		1	10/01/12 07:22	10/04/12 13:23	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Sample: 0987-09 W438		Lab ID: 10206600012		Collected: 09/25/12 11:18		Received: 09/25/12 17:21		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	10/01/12 07:22	10/04/12 13:44	83-32-9	
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 13:44	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 13:44	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 13:44	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 13:44	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 13:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 13:44	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 13:44	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 13:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/01/12 07:22	10/04/12 13:44	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/01/12 07:22	10/04/12 13:44	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/01/12 07:22	10/04/12 13:44	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/01/12 07:22	10/04/12 13:44	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/01/12 07:22	10/04/12 13:44	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	10/01/12 07:22	10/04/12 13:44	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/01/12 07:22	10/04/12 13:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76 %		58-125		1	10/01/12 07:22	10/04/12 13:44	321-60-8	
Terphenyl-d14 (S)	92 %		75-125		1	10/01/12 07:22	10/04/12 13:44	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly
Pace Project No.: 10206600

QC Batch:	OEXT/19835	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by SIM MSSV
Associated Lab Samples:	10206600001, 10206600002, 10206600003, 10206600004, 10206600005, 10206600006, 10206600007, 10206600008, 10206600009, 10206600010, 10206600011, 10206600012		

METHOD BLANK:	1299243	Matrix:	Water
Associated Lab Samples:	10206600001, 10206600002, 10206600003, 10206600004, 10206600005, 10206600006, 10206600007, 10206600008, 10206600009, 10206600010, 10206600011, 10206600012		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	10/04/12 10:38	
Acenaphthylene	ug/L	ND	0.040	10/04/12 10:38	
Anthracene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(a)anthracene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(a)pyrene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(b)fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(g,h,i)perylene	ug/L	ND	0.040	10/04/12 10:38	
Benzo(k)fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Chrysene	ug/L	ND	0.040	10/04/12 10:38	
Dibenz(a,h)anthracene	ug/L	ND	0.040	10/04/12 10:38	
Fluoranthene	ug/L	ND	0.040	10/04/12 10:38	
Fluorene	ug/L	ND	0.040	10/04/12 10:38	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	10/04/12 10:38	
Naphthalene	ug/L	ND	0.040	10/04/12 10:38	
Phenanthrene	ug/L	ND	0.040	10/04/12 10:38	
Pyrene	ug/L	ND	0.040	10/04/12 10:38	
2-Fluorobiphenyl (S)	%	76	58-125	10/04/12 10:38	
Terphenyl-d14 (S)	%	89	75-125	10/04/12 10:38	

LABORATORY CONTROL SAMPLE: 1299244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.69	69	56-125	
Acenaphthylene	ug/L	1	0.57	57	55-125	
Anthracene	ug/L	1	0.64	64	63-125	
Benzo(a)anthracene	ug/L	1	0.65	65	61-125	
Benzo(a)pyrene	ug/L	1	0.80	80	67-125	
Benzo(b)fluoranthene	ug/L	1	0.82	82	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.81	81	68-125	
Benzo(k)fluoranthene	ug/L	1	0.83	83	60-125	
Chrysene	ug/L	1	0.83	83	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.82	82	60-125	
Fluoranthene	ug/L	1	0.75	75	64-125	
Fluorene	ug/L	1	0.70	70	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.80	80	67-125	
Naphthalene	ug/L	1	0.69	69	53-125	
Phenanthrene	ug/L	1	0.79	79	64-125	
Pyrene	ug/L	1	0.80	80	64-125	
2-Fluorobiphenyl (S)	%			79	58-125	
Terphenyl-d14 (S)	%			92	75-125	

Date: 10/08/2012 06:03 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1299245 1299246											
Parameter	Units	10206439001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.70	0.69	68	67	55-125	.9	30
Acenaphthylene	ug/L	ND	1	1	0.56	0.54	55	52	55-125	4	30 M1
Anthracene	ug/L	ND	1	1	0.70	0.67	68	65	60-125	4	30
Benzo(a)anthracene	ug/L	ND	1	1	0.70	0.64	69	62	55-125	10	30
Benzo(a)pyrene	ug/L	ND	1	1	0.80	0.76	79	73	61-125	6	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.84	0.81	83	78	58-125	4	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.76	0.77	75	75	63-125	1	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.74	0.80	72	77	55-125	8	30
Chrysene	ug/L	ND	1	1	0.76	0.79	75	77	61-125	4	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.79	0.78	77	76	60-125	.7	30
Fluoranthene	ug/L	ND	1	1	0.79	0.74	77	71	68-125	7	30
Fluorene	ug/L	ND	1	1	0.70	0.71	69	69	60-125	1	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.78	0.77	76	74	59-125	2	30
Naphthalene	ug/L	ND	1	1	0.69	0.66	67	64	50-125	4	30
Phenanthrene	ug/L	ND	1	1	0.80	0.80	78	77	63-125	.02	30
Pyrene	ug/L	ND	1	1	0.81	0.76	79	74	57-125	6	30
2-Fluorobiphenyl (S)	%						72	74	58-125		
Terphenyl-d14 (S)	%						86	85	75-125		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1299247 1299248											
Parameter	Units	10206600002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	1.2	1.1	1.1	2.1	1.8	82	62	55-125	11	30
Acenaphthylene	ug/L	ND	1.1	1.1	0.65	0.55	61	53	55-125	16	30 M1
Anthracene	ug/L	ND	1.1	1.1	0.73	0.60	69	57	60-125	20	30 M1
Benzo(a)anthracene	ug/L	ND	1.1	1.1	0.74	0.61	70	58	55-125	20	30
Benzo(a)pyrene	ug/L	ND	1.1	1.1	0.85	0.71	80	67	61-125	19	30
Benzo(b)fluoranthene	ug/L	ND	1.1	1.1	0.90	0.74	84	71	58-125	19	30
Benzo(g,h,i)perylene	ug/L	ND	1.1	1.1	0.84	0.72	79	69	63-125	15	30
Benzo(k)fluoranthene	ug/L	ND	1.1	1.1	0.86	0.74	81	71	55-125	15	30
Chrysene	ug/L	ND	1.1	1.1	0.84	0.73	79	69	61-125	15	30
Dibenz(a,h)anthracene	ug/L	ND	1.1	1.1	0.86	0.72	81	69	60-125	17	30
Fluoranthene	ug/L	ND	1.1	1.1	0.83	0.69	78	65	68-125	18	30 M1
Fluorene	ug/L	ND	1.1	1.1	0.78	0.66	73	63	60-125	17	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1.1	1.1	0.84	0.72	79	68	59-125	15	30
Naphthalene	ug/L	ND	1.1	1.1	0.75	0.64	71	61	50-125	16	30
Phenanthrene	ug/L	ND	1.1	1.1	0.84	0.72	79	68	63-125	15	30
Pyrene	ug/L	ND	1.1	1.1	0.86	0.73	81	69	57-125	17	30
2-Fluorobiphenyl (S)	%						76	70	58-125		
Terphenyl-d14 (S)	%						88	77	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206600

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10206600001	0987-09 W422	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600002	0987-09 W434	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600003	0987-09 W434 D	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600004	0987-09 W434 FB	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600005	0987-09 P312	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600006	0987-09 P310	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600007	0987-09 P309	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600008	0987-09 W2	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600009	0987-09 W15	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600010	0987-09 W10	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600011	0987-09 W408	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631
10206600012	0987-09 W438	EPA 3510	OEXT/19835	EPA 8270 by SIM	MSSV/8631

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1127 x 1129 x 1140



10206600

Section A Required Client Information: Company: <u>Summit Environmental</u> Address: <u>1217 Bandana Blvd N.</u> City: <u>St. Paul, MN 55108</u> Email To: <u>Bgregg@summit.com</u> Phone: <u>651-262-4236</u> Requested Due Date/TAT: _____		Section B Required Project Information: Report To: <u>Bill Gregg</u> Copy To: _____ Purchase Order No.: <u>0987-0009</u> Project Name: <u>S.P. Reilly</u> Project Number: <u>0987-0009</u>		Section C Invoice Information: Attention: <u>Kevin McLammon</u> Company Name: <u>Summit Environmental</u> Address: <u>1217 Bandana Blvd</u> Pace Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: _____	
Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		Site Location: STATE: <u>MN</u>		Page: <u>1</u> of <u>2</u> 1660741	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	Matrix Code MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left)	MIXTURE CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE	TIME	DATE	TIME	SAMPLE CONDITIONS	Temp in °C	Received on (Y/N)	Sealed Cooler (Y/N)	Samples Intact (Y/N)
				COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME	DATE	TIME									
1	0987-09 W 422	WT	WT	9/25/12 7:50		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21	3.6	Y	Y	Y	Y	Y	Y	Y	Y
2	0987-09 W 434	WT	WT	9/25/12 8:21		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21	0.1	Y	Y	Y	Y	Y	Y	Y	Y
3	0987-09 W 434 D	WT	WT	9/25/12 8:21		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21	0.6	Y	Y	Y	Y	Y	Y	Y	Y
4	0987-09 W 434 MS	WT	WT	9/25/12 8:21		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
5	0987-09 W 434 MSD	WT	WT	9/25/12 8:21		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
6	0987-09 W 434 IB	WT	WT	9/25/12 8:21		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
7	0987-09 P 312	WT	WT	9/25/12 8:41		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
8	0987-09 P 310	WT	WT	9/25/12 10:31		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
9	0987-09 P 309	WT	WT	9/25/12 9:49		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
10	0987-09 W 2	WT	WT	9/25/12 12:40		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
11	0987-09 W 15	WT	WT	9/25/12 16:11		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
12	0987-09 W 10	WT	WT	9/25/12 14:12		G	WT	9/25/12 17:21	17:21	9/25/12 17:21	17:21									
ADDITIONAL COMMENTS Relinquished By: <u>Rebecca Endon</u> Date: <u>9/25/12</u> Time: <u>17:21</u> Affiliation: <u>ACE</u> Accepted By: <u>ACE</u> Date: <u>9/25/12</u> Time: <u>17:21</u> Affiliation: <u>ACE</u>												TEMPERATURE Temp in °C: <u>3.6</u> Received on: <u>Y</u> Sealed Cooler: <u>Y</u> Samples Intact: <u>Y</u>								
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: _____ SIGNATURE of SAMPLER: _____ DATE Signed (MM/DD/YYYY): _____																				

ORIGINAL

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



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10206600

Section A Required Client Information: Company: <u>Summit Environmental Solutions</u> Address: _____ Email To: _____ Phone: _____ Fax: _____ Requested Due Date/TAT: _____		Section B Required Project Information: Report To: <u>Bill Gregg</u> Copy To: _____ Purchase Order No.: <u>0987-0009</u> Project Name: <u>SUB/Billy</u> Project Number: <u>0987-0009</u>		Section C Invoice Information: Attention: _____ Company Name: _____ Address: _____ Pace Quote Reference: _____ Pace Project Manager: _____ Pace Profile #: _____	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		Site Location STATE: _____		Page: <u>2</u> of <u>2</u> 1577673	

ITEM #	Section D Required Client Information		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test ↑ PAH	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
	Matrix Codes MATRIX / CODE Drinking Water DW Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	COMPOSITE START DATE TIME			COMPOSITE END/GRAB DATE TIME								
1	0987-09 W408		WR G	9/25/12 15:15				2 X					011
2	0987-09 W438		WR G	9/25/12 11:18				2 X					012
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS					
	PRINT Name of SAMPLER:	SIGNATURE of SAMPLER:	PRINT Name of SAMPLER:	SIGNATURE of SAMPLER:			Received on Ice (Y/N)	Sealed Cooler (Y/N)	Custody (Y/N)	Samples Intact (Y/N)		
	Rebecca Eiden		Rebecca Eiden		9/25/12	17:21	3.6	Y	N	Y		
							0.1	Y	N	Y		
							0.6	Y	N	Y		

ORIGINAL

	Document Name:	Document Revised: 22Aug2012
	Sample Condition Upon Receipt Form	Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10206600

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other:



Tracking Number:

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: Temp Blank? ☐ Yes ☒ No

Thermometer Used: ☐ B88A912167504 ☒ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temperature: 3.6 ± 0.1 Biological Tissue Frozen? ☐ Yes ☒ No Date and Initials of Person Examining Contents: JE 9/25/12
Temp should be above freezing to 6°C

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <i>W</i>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☒ No

Person Contacted:

Date/Time:

Comments/Resolution:

Project Manager Review:

Date:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

10206600

23 of 23

October 11, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 SLP/Reilly
Pace Project No.: 10206759

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on September 26, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nevada Certification #: MN_00064

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

Page 2 of 16

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SAMPLE SUMMARY

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10206759001	0987-09 W20	Water	09/25/12 08:11	09/26/12 13:44
10206759002	0987-09 W20 D	Water	09/25/12 08:11	09/26/12 13:44
10206759003	0987-09 W20 FB	Water	09/25/12 08:11	09/26/12 13:44
10206759004	0987-09 W437	Water	09/25/12 11:50	09/26/12 13:44
10206759005	0987-09 P109	Water	09/25/12 08:31	09/26/12 13:44
10206759006	0987-09 P112	Water	09/25/12 10:05	09/26/12 13:44
10206759007	0987-09 P307	Water	09/25/12 11:10	09/26/12 13:44
10206759008	0987-09 P308	Water	09/25/12 12:39	09/26/12 13:44

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10206759001	0987-09 W20	EPA 8270 by SIM	JRH	18
10206759002	0987-09 W20 D	EPA 8270 by SIM	JRH	18
10206759003	0987-09 W20 FB	EPA 8270 by SIM	JRH	18
10206759004	0987-09 W437	EPA 8270 by SIM	JRH	18
10206759005	0987-09 P109	EPA 8270 by SIM	JRH	18
10206759006	0987-09 P112	EPA 8270 by SIM	JRH	18
10206759007	0987-09 P307	EPA 8270 by SIM	JRH	18
10206759008	0987-09 P308	EPA 8270 by SIM	JRH	18

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 W20		Lab ID: 10206759001		Collected: 09/25/12 08:11		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.041	0.0051	1	10/02/12 10:54	10/07/12 15:52	83-32-9	
Acenaphthylene	ND ug/L		0.041	0.0041	1	10/02/12 10:54	10/07/12 15:52	208-96-8	M1
Anthracene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 15:52	120-12-7	L2
Benzo(a)anthracene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 15:52	56-55-3	
Benzo(a)pyrene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 15:52	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 15:52	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 15:52	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 15:52	207-08-9	
Chrysene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 15:52	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 15:52	53-70-3	
Fluoranthene	ND ug/L		0.041	0.012	1	10/02/12 10:54	10/07/12 15:52	206-44-0	
Fluorene	ND ug/L		0.041	0.0041	1	10/02/12 10:54	10/07/12 15:52	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 15:52	193-39-5	
Naphthalene	ND ug/L		0.041	0.0061	1	10/02/12 10:54	10/07/12 15:52	91-20-3	
Phenanthrene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 15:52	85-01-8	
Pyrene	ND ug/L		0.041	0.013	1	10/02/12 10:54	10/07/12 15:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63 %		58-125		1	10/02/12 10:54	10/07/12 15:52	321-60-8	
Terphenyl-d14 (S)	82 %		75-125		1	10/02/12 10:54	10/07/12 15:52	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 W20 D		Lab ID: 10206759002		Collected: 09/25/12 08:11		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.041	0.0051	1	10/02/12 10:54	10/07/12 16:54	83-32-9	
Acenaphthylene	ND ug/L		0.041	0.0041	1	10/02/12 10:54	10/07/12 16:54	208-96-8	
Anthracene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 16:54	120-12-7	L2
Benzo(a)anthracene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 16:54	56-55-3	
Benzo(a)pyrene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 16:54	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 16:54	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 16:54	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 16:54	207-08-9	
Chrysene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 16:54	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.041	0.0092	1	10/02/12 10:54	10/07/12 16:54	53-70-3	
Fluoranthene	ND ug/L		0.041	0.012	1	10/02/12 10:54	10/07/12 16:54	206-44-0	
Fluorene	ND ug/L		0.041	0.0041	1	10/02/12 10:54	10/07/12 16:54	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.041	0.010	1	10/02/12 10:54	10/07/12 16:54	193-39-5	
Naphthalene	ND ug/L		0.041	0.0061	1	10/02/12 10:54	10/07/12 16:54	91-20-3	
Phenanthrene	ND ug/L		0.041	0.0082	1	10/02/12 10:54	10/07/12 16:54	85-01-8	
Pyrene	ND ug/L		0.041	0.013	1	10/02/12 10:54	10/07/12 16:54	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56 %		58-125		1	10/02/12 10:54	10/07/12 16:54	321-60-8	1M,S1
Terphenyl-d14 (S)	71 %		75-125		1	10/02/12 10:54	10/07/12 16:54	1718-51-0	S1

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 W20 FB		Lab ID: 10206759003		Collected: 09/25/12 08:11		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		0.043	0.0054	1	10/02/12 10:54	10/07/12 17:15	83-32-9	
Acenaphthylene	ND ug/L		0.043	0.0043	1	10/02/12 10:54	10/07/12 17:15	208-96-8	
Anthracene	ND ug/L		0.043	0.0086	1	10/02/12 10:54	10/07/12 17:15	120-12-7	L2
Benzo(a)anthracene	ND ug/L		0.043	0.0086	1	10/02/12 10:54	10/07/12 17:15	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	10/02/12 10:54	10/07/12 17:15	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	10/02/12 10:54	10/07/12 17:15	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	10/02/12 10:54	10/07/12 17:15	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0097	1	10/02/12 10:54	10/07/12 17:15	207-08-9	
Chrysene	ND ug/L		0.043	0.0097	1	10/02/12 10:54	10/07/12 17:15	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0097	1	10/02/12 10:54	10/07/12 17:15	53-70-3	
Fluoranthene	ND ug/L		0.043	0.013	1	10/02/12 10:54	10/07/12 17:15	206-44-0	
Fluorene	ND ug/L		0.043	0.0043	1	10/02/12 10:54	10/07/12 17:15	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	10/02/12 10:54	10/07/12 17:15	193-39-5	
Naphthalene	ND ug/L		0.043	0.0065	1	10/02/12 10:54	10/07/12 17:15	91-20-3	
Phenanthrene	ND ug/L		0.043	0.0086	1	10/02/12 10:54	10/07/12 17:15	85-01-8	
Pyrene	ND ug/L		0.043	0.014	1	10/02/12 10:54	10/07/12 17:15	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71 %		58-125		1	10/02/12 10:54	10/07/12 17:15	321-60-8	
Terphenyl-d14 (S)	91 %		75-125		1	10/02/12 10:54	10/07/12 17:15	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 W437		Lab ID: 10206759004		Collected: 09/25/12 11:50		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	47.3	ug/L	4.2	0.53	100	10/02/12 10:54	10/07/12 23:49	83-32-9	L2
Acenaphthylene	0.24	ug/L	0.042	0.0042	1	10/02/12 10:54	10/07/12 17:36	208-96-8	
Anthracene	0.73	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:36	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:36	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:36	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:36	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:36	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	10/02/12 10:54	10/07/12 17:36	206-44-0	
Fluorene	12.9	ug/L	4.2	0.42	100	10/02/12 10:54	10/07/12 23:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:36	193-39-5	
Naphthalene	633	ug/L	4.2	0.63	100	10/02/12 10:54	10/07/12 23:49	91-20-3	
Phenanthrene	1.1	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:36	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/02/12 10:54	10/07/12 17:36	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	73	%	58-125		1	10/02/12 10:54	10/07/12 17:36	321-60-8	
Terphenyl-d14 (S)	93	%	75-125		1	10/02/12 10:54	10/07/12 17:36	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 P109		Lab ID: 10206759005		Collected: 09/25/12 08:31		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0053	1	10/02/12 10:54	10/07/12 17:56	83-32-9	L2
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/02/12 10:54	10/07/12 17:56	208-96-8	
Anthracene	ND	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:56	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:56	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:56	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:56	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:56	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:56	207-08-9	
Chrysene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0095	1	10/02/12 10:54	10/07/12 17:56	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.013	1	10/02/12 10:54	10/07/12 17:56	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/02/12 10:54	10/07/12 17:56	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.011	1	10/02/12 10:54	10/07/12 17:56	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/02/12 10:54	10/07/12 17:56	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0084	1	10/02/12 10:54	10/07/12 17:56	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/02/12 10:54	10/07/12 17:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67 %		58-125		1	10/02/12 10:54	10/07/12 17:56	321-60-8	
Terphenyl-d14 (S)	90 %		75-125		1	10/02/12 10:54	10/07/12 17:56	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 P112		Lab ID: 10206759006		Collected: 09/25/12 10:05		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	ND	ug/L	0.042	0.0052	1	10/02/12 10:54	10/07/12 18:17	83-32-9	L2
Acenaphthylene	ND	ug/L	0.042	0.0042	1	10/02/12 10:54	10/07/12 18:17	208-96-8	
Anthracene	ND	ug/L	0.042	0.0083	1	10/02/12 10:54	10/07/12 18:17	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.042	0.0083	1	10/02/12 10:54	10/07/12 18:17	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.042	0.010	1	10/02/12 10:54	10/07/12 18:17	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.042	0.010	1	10/02/12 10:54	10/07/12 18:17	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.042	0.010	1	10/02/12 10:54	10/07/12 18:17	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.042	0.0094	1	10/02/12 10:54	10/07/12 18:17	207-08-9	
Chrysene	ND	ug/L	0.042	0.0094	1	10/02/12 10:54	10/07/12 18:17	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.042	0.0094	1	10/02/12 10:54	10/07/12 18:17	53-70-3	
Fluoranthene	ND	ug/L	0.042	0.012	1	10/02/12 10:54	10/07/12 18:17	206-44-0	
Fluorene	ND	ug/L	0.042	0.0042	1	10/02/12 10:54	10/07/12 18:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.042	0.010	1	10/02/12 10:54	10/07/12 18:17	193-39-5	
Naphthalene	ND	ug/L	0.042	0.0063	1	10/02/12 10:54	10/07/12 18:17	91-20-3	
Phenanthrene	ND	ug/L	0.042	0.0083	1	10/02/12 10:54	10/07/12 18:17	85-01-8	
Pyrene	ND	ug/L	0.042	0.014	1	10/02/12 10:54	10/07/12 18:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70 %		58-125		1	10/02/12 10:54	10/07/12 18:17	321-60-8	
Terphenyl-d14 (S)	91 %		75-125		1	10/02/12 10:54	10/07/12 18:17	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 P307		Lab ID: 10206759007		Collected: 09/25/12 11:10		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	7.6	ug/L	0.041	0.0051	1	10/02/12 10:54	10/07/12 18:38	83-32-9	L2
Acenaphthylene	1.9	ug/L	0.041	0.0041	1	10/02/12 10:54	10/07/12 18:38	208-96-8	
Anthracene	ND	ug/L	0.041	0.0082	1	10/02/12 10:54	10/07/12 18:38	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.041	0.0082	1	10/02/12 10:54	10/07/12 18:38	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.041	0.010	1	10/02/12 10:54	10/07/12 18:38	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.041	0.010	1	10/02/12 10:54	10/07/12 18:38	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.041	0.010	1	10/02/12 10:54	10/07/12 18:38	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.041	0.0092	1	10/02/12 10:54	10/07/12 18:38	207-08-9	
Chrysene	ND	ug/L	0.041	0.0092	1	10/02/12 10:54	10/07/12 18:38	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.041	0.0092	1	10/02/12 10:54	10/07/12 18:38	53-70-3	
Fluoranthene	ND	ug/L	0.041	0.012	1	10/02/12 10:54	10/07/12 18:38	206-44-0	
Fluorene	1.6	ug/L	0.041	0.0041	1	10/02/12 10:54	10/07/12 18:38	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.041	0.010	1	10/02/12 10:54	10/07/12 18:38	193-39-5	
Naphthalene	0.064	ug/L	0.041	0.0062	1	10/02/12 10:54	10/07/12 18:38	91-20-3	
Phenanthrene	0.063	ug/L	0.041	0.0082	1	10/02/12 10:54	10/07/12 18:38	85-01-8	
Pyrene	ND	ug/L	0.041	0.013	1	10/02/12 10:54	10/07/12 18:38	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	66	%	58-125		1	10/02/12 10:54	10/07/12 18:38	321-60-8	
Terphenyl-d14 (S)	88	%	75-125		1	10/02/12 10:54	10/07/12 18:38	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Sample: 0987-09 P308		Lab ID: 10206759008		Collected: 09/25/12 12:39		Received: 09/26/12 13:44		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	0.058	ug/L	0.043	0.0053	1	10/02/12 10:54	10/07/12 18:59	83-32-9	L2
Acenaphthylene	ND	ug/L	0.043	0.0043	1	10/02/12 10:54	10/07/12 18:59	208-96-8	
Anthracene	ND	ug/L	0.043	0.0085	1	10/02/12 10:54	10/07/12 18:59	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.043	0.0085	1	10/02/12 10:54	10/07/12 18:59	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.043	0.011	1	10/02/12 10:54	10/07/12 18:59	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.043	0.011	1	10/02/12 10:54	10/07/12 18:59	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.043	0.011	1	10/02/12 10:54	10/07/12 18:59	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.043	0.0096	1	10/02/12 10:54	10/07/12 18:59	207-08-9	
Chrysene	ND	ug/L	0.043	0.0096	1	10/02/12 10:54	10/07/12 18:59	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.043	0.0096	1	10/02/12 10:54	10/07/12 18:59	53-70-3	
Fluoranthene	ND	ug/L	0.043	0.013	1	10/02/12 10:54	10/07/12 18:59	206-44-0	
Fluorene	ND	ug/L	0.043	0.0043	1	10/02/12 10:54	10/07/12 18:59	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.043	0.011	1	10/02/12 10:54	10/07/12 18:59	193-39-5	
Naphthalene	ND	ug/L	0.043	0.0064	1	10/02/12 10:54	10/07/12 18:59	91-20-3	
Phenanthrene	ND	ug/L	0.043	0.0085	1	10/02/12 10:54	10/07/12 18:59	85-01-8	
Pyrene	ND	ug/L	0.043	0.014	1	10/02/12 10:54	10/07/12 18:59	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	69	%	58-125		1	10/02/12 10:54	10/07/12 18:59	321-60-8	
Terphenyl-d14 (S)	91	%	75-125		1	10/02/12 10:54	10/07/12 18:59	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly
Pace Project No.: 10206759

QC Batch: OEXT/19855 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by SIM MSSV
Associated Lab Samples: 10206759001, 10206759002, 10206759003, 10206759004, 10206759005, 10206759006, 10206759007, 10206759008

METHOD BLANK: 1300095 Matrix: Water
Associated Lab Samples: 10206759001, 10206759002, 10206759003, 10206759004, 10206759005, 10206759006, 10206759007, 10206759008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	10/07/12 15:10	
Acenaphthylene	ug/L	ND	0.040	10/07/12 15:10	
Anthracene	ug/L	ND	0.040	10/07/12 15:10	
Benzo(a)anthracene	ug/L	ND	0.040	10/07/12 15:10	
Benzo(a)pyrene	ug/L	ND	0.040	10/07/12 15:10	
Benzo(b)fluoranthene	ug/L	ND	0.040	10/07/12 15:10	
Benzo(g,h,i)perylene	ug/L	ND	0.040	10/07/12 15:10	
Benzo(k)fluoranthene	ug/L	ND	0.040	10/07/12 15:10	
Chrysene	ug/L	ND	0.040	10/07/12 15:10	
Dibenz(a,h)anthracene	ug/L	ND	0.040	10/07/12 15:10	
Fluoranthene	ug/L	ND	0.040	10/07/12 15:10	
Fluorene	ug/L	ND	0.040	10/07/12 15:10	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	10/07/12 15:10	
Naphthalene	ug/L	ND	0.040	10/07/12 15:10	
Phenanthrene	ug/L	ND	0.040	10/07/12 15:10	
Pyrene	ug/L	ND	0.040	10/07/12 15:10	
2-Fluorobiphenyl (S)	%	76	58-125	10/07/12 15:10	
Terphenyl-d14 (S)	%	95	75-125	10/07/12 15:10	

LABORATORY CONTROL SAMPLE: 1300096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.68	68	56-125	
Acenaphthylene	ug/L	1	0.56	56	55-125	
Anthracene	ug/L	1	0.62	62	63-125	L0
Benzo(a)anthracene	ug/L	1	0.64	64	61-125	
Benzo(a)pyrene	ug/L	1	0.77	77	67-125	
Benzo(b)fluoranthene	ug/L	1	0.82	82	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.76	76	68-125	
Benzo(k)fluoranthene	ug/L	1	0.76	76	60-125	
Chrysene	ug/L	1	0.77	77	67-125	
Dibenz(a,h)anthracene	ug/L	1	0.79	79	60-125	
Fluoranthene	ug/L	1	0.73	73	64-125	
Fluorene	ug/L	1	0.69	69	62-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.77	77	67-125	
Naphthalene	ug/L	1	0.68	68	53-125	
Phenanthrene	ug/L	1	0.77	77	64-125	
Pyrene	ug/L	1	0.75	75	64-125	
2-Fluorobiphenyl (S)	%			72	58-125	
Terphenyl-d14 (S)	%			88	75-125	

Date: 10/11/2012 03:30 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1300097 1300098											
Parameter	Units	10206759001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Acenaphthene	ug/L	ND	1	1	0.66	0.66	62	63	55-125	.6	30
Acenaphthylene	ug/L	ND	1	1	0.56	0.58	54	56	55-125	3	30 M1
Anthracene	ug/L	ND	1	1	0.70	0.74	67	72	60-125	6	30
Benzo(a)anthracene	ug/L	ND	1	1	0.72	0.76	69	73	55-125	5	30
Benzo(a)pyrene	ug/L	ND	1	1	0.81	0.83	78	81	61-125	2	30
Benzo(b)fluoranthene	ug/L	ND	1	1	0.85	0.87	82	84	58-125	2	30
Benzo(g,h,i)perylene	ug/L	ND	1	1	0.76	0.75	73	73	63-125	1	30
Benzo(k)fluoranthene	ug/L	ND	1	1	0.76	0.77	73	75	55-125	1	30
Chrysene	ug/L	ND	1	1	0.77	0.77	74	75	61-125	.5	30
Dibenz(a,h)anthracene	ug/L	ND	1	1	0.78	0.77	75	74	60-125	1	30
Fluoranthene	ug/L	ND	1	1	0.79	0.82	76	80	68-125	4	30
Fluorene	ug/L	ND	1	1	0.69	0.71	67	69	60-125	2	30
Indeno(1,2,3-cd)pyrene	ug/L	ND	1	1	0.77	0.77	74	74	59-125	.2	30
Naphthalene	ug/L	ND	1	1	0.64	0.63	60	60	50-125	2	30
Phenanthrene	ug/L	ND	1	1	0.77	0.77	74	75	63-125	.08	30
Pyrene	ug/L	ND	1	1	0.82	0.85	79	82	57-125	3	30
2-Fluorobiphenyl (S)	%						65	65	58-125		
Terphenyl-d14 (S)	%						87	86	75-125		

QUALIFIERS

Project: 0987-0009 SLP/Reilly
Pace Project No.: 10206759

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1M	Sample re-extracted out of hold to confirm data, data was confirmed.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S1	Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 SLP/Reilly

Pace Project No.: 10206759

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10206759001	0987-09 W20	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759002	0987-09 W20 D	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759003	0987-09 W20 FB	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759004	0987-09 W437	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759005	0987-09 P109	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759006	0987-09 P112	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759007	0987-09 P307	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640
10206759008	0987-09 P308	EPA 3510	OEXT/19855	EPA 8270 by SIM	MSSV/8640



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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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10206759


Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: <u>Summit Environmental</u>	Report To: <u>Bill Gregg</u>	Attention: <u>Kevin McLarnon</u>	Company Name: <u>Summit Environmental</u>	Page: <u>1</u> of <u>1</u>	Invoice Number: <u>1636582</u>
Address: <u>1217 Bandana Blvd</u>	Copy To:	Address: <u>1217 Bandana Blvd</u>	REGULATORY AGENCY		
ST. Paul MN 55108		Pace Order No.: <u>0987-0009</u>	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER		
Email To: <u>B.gregg@summitenv.com</u>		Project Name: <u>0987-0009 52P/Billy</u>	<input type="checkbox"/> UST <input type="checkbox"/> RCRA		
Phone: <u></u>		Pace Project Manager: <u></u>	Site Location		
Requested Due Date/TAT: <u></u>		Project Number: <u>0987-0009</u>	STATE: <u>MN</u>		

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION		PRESERVATIVES	Analysis Test 1	Requested Analysis Filtered (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB			DATE	TIME				
1	0987-09 W20	DW			WT	G	9/25/12 8:11					
2	0987-09 W20 D	WT			WT	G	9/25/12 8:11					
3	0987-09 W26 MS	WT			WT	G	9/25/12 8:11					
4	0987-09 W20 MSD	WT			WT	G	9/25/12 8:11					
5	0987-09 W20 FB	WT			WT	G	9/25/12 11:50					
6	0987-09 W437	WT			WT	G	9/25/12 8:31					
7	0987-09 P109	WT			WT	G	9/25/12 10:05					
8	0987-09 P112	WT			WT	G	9/25/12 11:10					
9	0987-09 P307	WT			WT	G	9/25/12 11:39					
10	0987-09 P308	WT			WT	G	9/25/12 12:39					
11												
12												
ADDITIONAL COMMENTS												
RELINQUISHED BY / AFFILIATION: <u>Rebecca Eiden</u> DATE: <u>9/25/12</u> TIME: <u>13:44</u>												
ACCEPTED BY / AFFILIATION: <u>JN Pace</u> DATE: <u>9/26/12</u> TIME: <u>13:44</u>												
SAMPLE CONDITIONS												
Received on Ice (Y/N) <u>Y</u> Sealed Cooler (Y/N) <u>N</u> Samples Intact (Y/N) <u>Y</u>												
Temp in °C <u>0.4</u>												
Residual Chlorine (Y/N)												

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: <u>Rebecca Eiden</u>	DATE Signed (MM/DD/YYYY): <u>9/25/12</u>
SIGNATURE of SAMPLER: <u>Rebecca Eiden</u>	

ORIGINAL

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 22Aug2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.04	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name: <u>Summit Env</u>	Project #:	WO# : 10206759  10206759
	Courier: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other:		
Tracking Number: _____			

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☐ 888A912167504 ☐ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 0.4 Biological Tissue Frozen? ☐ Yes ☐ No Date and Initials of Person Examining Contents: 9/26/12 TN
 Temp should be above freezing to 6°C

			Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>			
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12) Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl Sample # Initial when completed: Lot # of added preservative:	
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased): _____			

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Monaht Permitt Date: 9/27/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

December 18, 2012

Bill Gregg
Summit Envirosolutions
1217 Bandana Blvd
Saint Paul, MN 55108

RE: Project: 0987-0009 Reilly Site
Pace Project No.: 10214568

Dear Bill Gregg:

Enclosed are the analytical results for sample(s) received by the laboratory on December 06, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mariah Peronto

mariah.peronto@pacelabs.com
Project Manager

Enclosures

cc: Peter Bell, Summit Envirosolutions



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: Pace

Florida/NELAP Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #Pace

Idaho Certification #: MN00064

Illinois Certification #: 200011

Kansas Certification #: E-10167

Louisiana Certification #: 03086

Louisiana Certification #: LA080009

Maine Certification #: 2007029

Maryland Certification #: 322

Michigan DEQ Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT CERT0092

Nebraska Certification #: Pace

Nevada Certification #: MN_00064

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Dakota Certification #: R-036

North Dakota Certification #: R-036A

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Tennessee Certification #: 02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia/DCLS Certification #: 002521

Virginia/VELAP Certification #: 460163

Washington Certification #: C754

West Virginia Certification #: 382

Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

Page 2 of 9

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SAMPLE SUMMARY

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10214568001	W420-120612	Water	12/06/12 09:37	12/06/12 13:05
10214568002	W421-120612	Water	12/06/12 09:40	12/06/12 13:05

REPORT OF LABORATORY ANALYSIS

Page 3 of 9

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SAMPLE ANALYTE COUNT

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10214568001	W420-120612	EPA 8270 by SIM	WJH	18
10214568002	W421-120612	EPA 8270 by SIM	WJH	18

REPORT OF LABORATORY ANALYSIS

Page 4 of 9

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ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Sample: W420-120612		Lab ID: 10214568001		Collected: 12/06/12 09:37		Received: 12/06/12 13:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	148 ug/L		4.3	0.53	100	12/12/12 08:06	12/15/12 18:49	83-32-9	
Acenaphthylene	0.55 ug/L		0.043	0.0043	1	12/12/12 08:06	12/13/12 20:43	208-96-8	
Anthracene	1.8 ug/L		0.043	0.0085	1	12/12/12 08:06	12/13/12 20:43	120-12-7	
Benzo(a)anthracene	ND ug/L		0.043	0.0085	1	12/12/12 08:06	12/13/12 20:43	56-55-3	
Benzo(a)pyrene	ND ug/L		0.043	0.011	1	12/12/12 08:06	12/13/12 20:43	50-32-8	
Benzo(b)fluoranthene	ND ug/L		0.043	0.011	1	12/12/12 08:06	12/13/12 20:43	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		0.043	0.011	1	12/12/12 08:06	12/13/12 20:43	191-24-2	
Benzo(k)fluoranthene	ND ug/L		0.043	0.0096	1	12/12/12 08:06	12/13/12 20:43	207-08-9	
Chrysene	ND ug/L		0.043	0.0096	1	12/12/12 08:06	12/13/12 20:43	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		0.043	0.0096	1	12/12/12 08:06	12/13/12 20:43	53-70-3	
Fluoranthene	1.2 ug/L		0.043	0.013	1	12/12/12 08:06	12/13/12 20:43	206-44-0	
Fluorene	53.6 ug/L		4.3	0.43	100	12/12/12 08:06	12/15/12 18:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND ug/L		0.043	0.011	1	12/12/12 08:06	12/13/12 20:43	193-39-5	
Naphthalene	1730 ug/L		21.3	3.2	500	12/12/12 08:06	12/17/12 16:28	91-20-3	
Phenanthrene	39.8 ug/L		4.3	0.85	100	12/12/12 08:06	12/15/12 18:49	85-01-8	
Pyrene	0.46 ug/L		0.043	0.014	1	12/12/12 08:06	12/13/12 20:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	74 %		58-125		1	12/12/12 08:06	12/13/12 20:43	321-60-8	
Terphenyl-d14 (S)	84 %		75-125		1	12/12/12 08:06	12/13/12 20:43	1718-51-0	

ANALYTICAL RESULTS

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Sample: W421-120612		Lab ID: 10214568002		Collected: 12/06/12 09:40		Received: 12/06/12 13:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510							
Acenaphthene	91.2	ug/L	0.42	0.053	10	12/12/12 08:06	12/15/12 19:09	83-32-9	
Acenaphthylene	1.1	ug/L	0.042	0.0042	1	12/12/12 08:06	12/13/12 21:03	208-96-8	
Anthracene	8.0	ug/L	0.042	0.0084	1	12/12/12 08:06	12/13/12 21:03	120-12-7	
Benzo(a)anthracene	5.6	ug/L	0.042	0.0084	1	12/12/12 08:06	12/13/12 21:03	56-55-3	
Benzo(a)pyrene	3.9	ug/L	0.042	0.011	1	12/12/12 08:06	12/13/12 21:03	50-32-8	
Benzo(b)fluoranthene	5.3	ug/L	0.042	0.011	1	12/12/12 08:06	12/13/12 21:03	205-99-2	
Benzo(g,h,i)perylene	1.9	ug/L	0.042	0.011	1	12/12/12 08:06	12/13/12 21:03	191-24-2	
Benzo(k)fluoranthene	2.1	ug/L	0.042	0.0095	1	12/12/12 08:06	12/13/12 21:03	207-08-9	
Chrysene	4.7	ug/L	0.042	0.0095	1	12/12/12 08:06	12/13/12 21:03	218-01-9	
Dibenz(a,h)anthracene	0.57	ug/L	0.042	0.0095	1	12/12/12 08:06	12/13/12 21:03	53-70-3	
Fluoranthene	34.8	ug/L	0.42	0.13	10	12/12/12 08:06	12/15/12 19:09	206-44-0	
Fluorene	49.2	ug/L	0.42	0.042	10	12/12/12 08:06	12/15/12 19:09	86-73-7	
Indeno(1,2,3-cd)pyrene	1.5	ug/L	0.042	0.011	1	12/12/12 08:06	12/13/12 21:03	193-39-5	
Naphthalene	349	ug/L	2.1	0.32	50	12/12/12 08:06	12/15/12 18:29	91-20-3	
Phenanthrene	67.6	ug/L	0.42	0.084	10	12/12/12 08:06	12/15/12 19:09	85-01-8	
Pyrene	20.7	ug/L	0.42	0.14	10	12/12/12 08:06	12/15/12 19:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	58-125		1	12/12/12 08:06	12/13/12 21:03	321-60-8	
Terphenyl-d14 (S)	84	%	75-125		1	12/12/12 08:06	12/13/12 21:03	1718-51-0	

QUALITY CONTROL DATA

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

QC Batch: OEXT/20494

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270 Water PAH by SIM MSSV

Associated Lab Samples: 10214568001, 10214568002

METHOD BLANK: 1349317

Matrix: Water

Associated Lab Samples: 10214568001, 10214568002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.040	12/13/12 17:45	
Acenaphthylene	ug/L	ND	0.040	12/13/12 17:45	
Anthracene	ug/L	ND	0.040	12/13/12 17:45	
Benzo(a)anthracene	ug/L	ND	0.040	12/13/12 17:45	
Benzo(a)pyrene	ug/L	ND	0.040	12/13/12 17:45	
Benzo(b)fluoranthene	ug/L	ND	0.040	12/13/12 17:45	
Benzo(g,h,i)perylene	ug/L	ND	0.040	12/13/12 17:45	
Benzo(k)fluoranthene	ug/L	ND	0.040	12/13/12 17:45	
Chrysene	ug/L	ND	0.040	12/13/12 17:45	
Dibenz(a,h)anthracene	ug/L	ND	0.040	12/13/12 17:45	
Fluoranthene	ug/L	ND	0.040	12/13/12 17:45	
Fluorene	ug/L	ND	0.040	12/13/12 17:45	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.040	12/13/12 17:45	
Naphthalene	ug/L	ND	0.040	12/13/12 17:45	
Phenanthrene	ug/L	ND	0.040	12/13/12 17:45	
Pyrene	ug/L	ND	0.040	12/13/12 17:45	
2-Fluorobiphenyl (S)	%	60	58-125	12/13/12 17:45	
Terphenyl-d14 (S)	%	81	75-125	12/13/12 17:45	

LABORATORY CONTROL SAMPLE & LCSD: 1349318

1349319

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Acenaphthene	ug/L	1	0.58	0.59	58	59	56-125	1	20	
Acenaphthylene	ug/L	1	0.56	0.56	56	56	55-125	.2	20	
Anthracene	ug/L	1	0.69	0.70	69	70	63-125	.8	20	
Benzo(a)anthracene	ug/L	1	0.68	0.69	68	69	61-125	2	20	
Benzo(a)pyrene	ug/L	1	0.71	0.75	71	75	67-125	5	20	
Benzo(b)fluoranthene	ug/L	1	0.73	0.74	73	74	64-125	2	20	
Benzo(g,h,i)perylene	ug/L	1	0.74	0.76	74	76	68-125	2	20	
Benzo(k)fluoranthene	ug/L	1	0.80	0.83	80	83	60-125	3	20	
Chrysene	ug/L	1	0.74	0.76	74	76	67-125	3	20	
Dibenz(a,h)anthracene	ug/L	1	0.73	0.75	73	75	60-125	2	20	
Fluoranthene	ug/L	1	0.78	0.81	78	81	64-125	4	20	
Fluorene	ug/L	1	0.63	0.64	63	64	62-125	3	20	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.73	0.75	73	75	67-125	3	20	
Naphthalene	ug/L	1	0.56	0.54	56	54	53-125	3	20	
Phenanthrene	ug/L	1	0.69	0.70	69	70	64-125	2	20	
Pyrene	ug/L	1	0.75	0.77	75	77	64-125	2	20	
2-Fluorobiphenyl (S)	%				59	59	58-125			
Terphenyl-d14 (S)	%				77	79	75-125			

Date: 12/18/2012 11:43 AM

REPORT OF LABORATORY ANALYSIS

Page 7 of 9

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QUALIFIERS

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 0987-0009 Reilly Site

Pace Project No.: 10214568

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10214568001	W420-120612	EPA 3510	OEXT/20494	EPA 8270 by SIM	MSSV/8869
10214568002	W421-120612	EPA 3510	OEXT/20494	EPA 8270 by SIM	MSSV/8869

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10214578

Section A	Section B	Section C
Required Client Information:	Required Project Information:	Invoice Information:
Company: Summit Environments Address: 817 Bandana Blvd N St Paul, MN 55108 Email To: bgregg@summite.com Phone: 651-262-4336 Fax: Requested Due Date/TAT:	Report To: Bill Gregg Copy To: Purchase Order No.: 0987-0009 Project Name: Reilly Site Project Number: 0987-0009	Attention: Same Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #:
		REGULATORY AGENCY
		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____
		Site Location STATE: MN

[illegible]

ORIGINAL

PRINT Name of SAMPLER:

100

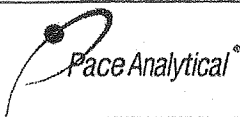
DATE Signed (MM/DD/YY).

12/06/12

Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-0-020rev 07 15-May-2007

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 13Nov2012 Page 1 of 1
	Document No.: F-MN-L-213-rev.05	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Summit Project #: _____

WO# : 10214568



10214568

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No
Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ Temp Blank? ☒ Yes ☐ No
Thermometer Used: ☐ B88A912167504 ☒ 80512447 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun
Cooler Temp Read (°C): 0.6 Cooler Temp Corrected (°C): 0.8 Biological Tissue Frozen? ☐ Yes ☐ No
Temp should be above freezing to 6°C Date and Initials of Person Examining Contents: 12/6/12 TN

				Comments:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>				
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: No charge for these samples due to earlier

lab error at this site

Project Manager Review: Mamab Khan

Date: 12/7/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



ANALYTICAL REPORT

Lab Number:	L1213722
Client:	Summit Envirosolutions Inc 1217 Bandana Blvd St. Paul, MN 55108
ATTN:	Bill Gregg
Phone:	(651) 262-4236
Project Name:	REILLY SITE
Project Number:	0987-0009-600
Report Date:	08/06/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1213722-01	E13-073112	Not Specified	07/31/12 10:00
L1213722-02	E13D-073112	Not Specified	07/31/12 10:00

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Cynthia McQueen

Title: Technical Director/Representative

Date: 08/06/12

ORGANICS

SEMIVOLATILES

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

SAMPLE RESULTS

Lab ID: L1213722-01
 Client ID: E13-073112
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 1,8270-SIM
 Analytical Date: 08/02/12 21:44
 Analyst: CM

Date Collected: 07/31/12 10:00
 Date Received: 08/01/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/02/12 10:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
Acenaphthylene	10.7		ng/l	9.52	--	1
Acenaphthene	110		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
Phenanthrene	ND		ng/l	9.52	--	1
Anthracene	ND		ng/l	9.52	--	1
Fluoranthene	ND		ng/l	9.52	--	1
Pyrene	13.8		ng/l	9.52	--	1
Benz(a)anthracene	ND		ng/l	9.52	--	1
Chrysene	ND		ng/l	9.52	--	1
Benzo(b)fluoranthene	ND		ng/l	9.52	--	1
Benzo(k)fluoranthene	ND		ng/l	9.52	--	1
Benzo(a)pyrene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.52	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.52	--	1
Benzo(ghi)perylene	ND		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-130
Pyrene-d10	82		30-130
Benzo(b)fluoranthene-d12	88		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

SAMPLE RESULTS

Lab ID: L1213722-02
Client ID: E13D-073112
Sample Location: Not Specified
Matrix: Water
Analytical Method: 1,8270-SIM
Analytical Date: 08/02/12 22:15
Analyst: CM

Date Collected: 07/31/12 10:00
Date Received: 08/01/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 08/02/12 10:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
Acenaphthylene	10.8		ng/l	9.52	--	1
Acenaphthene	111		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
Phenanthrene	ND		ng/l	9.52	--	1
Anthracene	ND		ng/l	9.52	--	1
Fluoranthene	ND		ng/l	9.52	--	1
Pyrene	13.1		ng/l	9.52	--	1
Benz(a)anthracene	ND		ng/l	9.52	--	1
Chrysene	ND		ng/l	9.52	--	1
Benzo(b)fluoranthene	ND		ng/l	9.52	--	1
Benzo(k)fluoranthene	ND		ng/l	9.52	--	1
Benzo(a)pyrene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.52	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.52	--	1
Benzo(ghi)perylene	ND		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-130
Pyrene-d10	86		30-130
Benzo(b)fluoranthene-d12	92		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270-SIM
Analytical Date: 08/02/12 20:11
Analyst: CM

Extraction Method: EPA 3510C
Extraction Date: 08/02/12 10:00

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG552489-1					
Naphthalene	ND		ng/l	10.0	--
2-Methylnaphthalene	ND		ng/l	10.0	--
Acenaphthylene	ND		ng/l	10.0	--
Acenaphthene	ND		ng/l	10.0	--
Fluorene	ND		ng/l	10.0	--
Phenanthrene	ND		ng/l	10.0	--
Anthracene	ND		ng/l	10.0	--
Fluoranthene	ND		ng/l	10.0	--
Pyrene	ND		ng/l	10.0	--
Benz(a)anthracene	ND		ng/l	10.0	--
Chrysene	ND		ng/l	10.0	--
Benzo(b)fluoranthene	ND		ng/l	10.0	--
Benzo(k)fluoranthene	ND		ng/l	10.0	--
Benzo(a)pyrene	ND		ng/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--
Dibenz(a,h)anthracene	ND		ng/l	10.0	--
Benzo(ghi)perylene	ND		ng/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	80		30-130
Pyrene-d10	81		30-130
Benzo(b)fluoranthene-d12	87		30-130

Lab Control Sample Analysis Batch Quality Control

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG552489-2 WG552489-3								
Naphthalene	71		76		40-140	7		30
2-Methylnaphthalene	72		79		40-140	9		30
Acenaphthylene	72		77		40-140	7		30
Acenaphthene	71		78		40-140	9		30
Fluorene	75		81		40-140	8		30
Phenanthrene	74		79		40-140	7		30
Anthracene	78		84		40-140	7		30
Fluoranthene	84		88		40-140	5		30
Pyrene	74		78		40-140	5		30
Benz(a)anthracene	81		85		40-140	5		30
Chrysene	77		81		40-140	5		30
Benzo(b)fluoranthene	83		92		40-140	10		30
Benzo(k)fluoranthene	83		81		40-140	2		30
Benzo(a)pyrene	79		84		40-140	6		30
Indeno(1,2,3-cd)Pyrene	91		100		40-140	9		30
Dibenz(a,h)anthracene	84		88		40-140	5		30
Benzo(ghi)perylene	80		85		40-140	6		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG552489-2 WG552489-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	79		82		30-130
Pyrene-d10	79		81		30-130
Benzo(b)fluoranthene-d12	87		89		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1213722-01A	Amber 1000ml unpreserved	A	7	4.8	Y	Present/Intact	A2-PAH-8270SIM(7)
L1213722-01B	Amber 1000ml unpreserved	A	7	4.8	Y	Present/Intact	A2-PAH-8270SIM(7)
L1213722-02A	Amber 1000ml unpreserved	A	7	4.8	Y	Present/Intact	A2-PAH-8270SIM(7)
L1213722-02B	Amber 1000ml unpreserved	A	7	4.8	Y	Present/Intact	A2-PAH-8270SIM(7)

*Values in parentheses indicate holding time in days

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **TO-15**: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.



The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

L1213722

Invoice Information:

Page: 1 of 1

1450440

Company: <u>Summit Envirosolutions</u>	Report To: <u>Bill Gregg</u>	Attention: <u>Bill Gregg</u>	1450440	
Address: <u>1217 Bandana Blvd</u> <u>St. Paul, MN 55108</u>	Copy To:	Company Name:	REGULATORY AGENCY	
		Address:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER	
Email To: <u>bgregg@summit2.com</u>	Purchase Order No.: <u>0987-0009</u>	Pace Quote Reference:	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Phone: <u>651-267-4236</u> Fax:	Project Name: <u>Reilly Site</u>	Pace Project Manager:	Site Location	<u>MN</u>
Requested Due Date/TAT:	Project Number: <u>0987-0009-600</u>	Pace Profile #:	STATE:	

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	NW Thompson / Summit	7-31-12	12:00	FedEx			
	FedEx	8/1/12	1000	[Signature]	8/1/12	1000	

ORIGINAL

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	William M. Gregg				
SIGNATURE of SAMPLER:	William M. Gregg	DATE Signed (MM/DD/YY):	07/31/12		

**DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA**

**ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. L1213722**

Analyses Performed

By:

**Alpha Analytical
Westborough, MA**

For:

**Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota**

February 27, 2013

Reilly\L1213772-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Alpha Analytical for two aqueous samples from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. L1213722 in a single data package. The following samples were reported:

E13-073112

E13D-073112

Based on the validation effort, all results were determined to be valid as reported.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270D SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of July 31, 2012. The samples were shipped via FedEx and received by the laboratory on August 1, 2012. The temperature of the cooler on receipt at the laboratory was noted on the COC and was acceptable (4.8°C ; criteria $4.0^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$). Samples were extracted on August 2, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on August 2, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "PAH5". Two Decafluorotriphenylphosphine (DFTPP) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Each of the performance checks were documented and were acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for several in several standards. The data package included the manual integration results for 10 ng/ml and 500 ng/ml standards. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on July 16, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately following the IC.

B. Continuing Calibration (CC)

One CC standards was analyzed in association with these samples. Reported relative response factors (RRFs) and percent differences (%D) met acceptance criteria.

IV. Blanks

One laboratory method blank was analyzed in support of these samples. No target analytes were detected in the method blank.

V. Surrogate Compound Recovery

Recoveries of all surrogate compounds were correctly calculated, accurately reported.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

An MS/MSD was not performed with this data set.

B. Laboratory Control Sample (LCS)

Results for one LCS and LCS Duplicate were provided in the data package. All recoveries were acceptable.

VII. Field Duplicate

Sample E13D-082812 was collected as a field duplicate of sample E13-082812. Precision between paired samples met acceptance criterion ($\leq 25\%$ RPD if both samples are $>5\times$ RL).

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limit for

pyrene. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issue was observed:

- Detailed spectra for analytes that were manually integrated in the IC were not provided in the laboratory report. The laboratory was contacted and supplied the missing information electronically. All manual integrations were acceptable.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: July 31, 2012

Job No. L1213722

ddms Project No. 2006-0022

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

SAMPLE RESULTS

Lab ID: L1213722-01
 Client ID: E13-073112
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 1,8270-SIM
 Analytical Date: 08/02/12 21:44
 Analyst: CM

Date Collected: 07/31/12 10:00
 Date Received: 08/01/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/02/12 10:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
Acenaphthylene	10.7		ng/l	9.52	--	1
Acenaphthene	110		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
Phenanthrene	ND		ng/l	9.52	--	1
Anthracene	ND		ng/l	9.52	--	1
Fluoranthene	ND		ng/l	9.52	--	1
Pyrene	13.8		ng/l	9.52	--	1
Benz(a)anthracene	ND		ng/l	9.52	--	1
Chrysene	ND		ng/l	9.52	--	1
Benzo(b)fluoranthene	ND		ng/l	9.52	--	1
Benzo(k)fluoranthene	ND		ng/l	9.52	--	1
Benzo(a)pyrene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.52	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.52	--	1
Benzo(ghi)perylene	ND		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-130
Pyrene-d10	82		30-130
Benzo(b)fluoranthene-d12	88		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1213722
Report Date: 08/06/12

SAMPLE RESULTS

Lab ID: L1213722-02
 Client ID: E13D-073112
 Sample Location: Not Specified
 Matrix: Water
 Analytical Method: 1,8270-SIM
 Analytical Date: 08/02/12 22:15
 Analyst: CM

Date Collected: 07/31/12 10:00
 Date Received: 08/01/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 08/02/12 10:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	9.52	--	1
2-Methylnaphthalene	ND		ng/l	9.52	--	1
Acenaphthylene	10.8		ng/l	9.52	--	1
Acenaphthene	111		ng/l	9.52	--	1
Fluorene	ND		ng/l	9.52	--	1
Phenanthrene	ND		ng/l	9.52	--	1
Anthracene	ND		ng/l	9.52	--	1
Fluoranthene	ND		ng/l	9.52	--	1
Pyrene	13.1		ng/l	9.52	--	1
Benz(a)anthracene	ND		ng/l	9.52	--	1
Chrysene	ND		ng/l	9.52	--	1
Benzo(b)fluoranthene	ND		ng/l	9.52	--	1
Benzo(k)fluoranthene	ND		ng/l	9.52	--	1
Benzo(a)pyrene	ND		ng/l	9.52	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	9.52	--	1
Dibenz(a,h)anthracene	ND		ng/l	9.52	--	1
Benzo(ghi)perylene	ND		ng/l	9.52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	83		30-130
Pyrene-d10	86		30-130
Benzo(b)fluoranthene-d12	92		30-130



ANALYTICAL REPORT

Lab Number:	L1215521
Client:	Summit Envirosolutions Inc 1217 Bandana Blvd St. Paul, MN 55108
ATTN:	Bill Gregg
Phone:	(651) 262-4236
Project Name:	Not Specified
Project Number:	Not Specified
Report Date:	09/14/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1215521
Report Date: 09/14/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1215521-01	E13-082812	CSLP-REILLY SITE	08/28/12 07:00
L1215521-02	E13D-082812	CSLP-REILLY SITE	08/28/12 07:00

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cynthia McQueen

Title: Technical Director/Representative

Date: 09/14/12

ORGANICS

SEMIVOLATILES

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-01
Client ID: E13-082812
Sample Location: CSLP-REILLY SITE
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/05/12 18:02
Analyst: CM

Date Collected: 08/28/12 07:00
Date Received: 08/30/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	120		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	16.4		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-01

Date Collected: 08/28/12 07:00

Client ID: E13-082812

Date Received: 08/30/12

Sample Location: CSLP-REILLY SITE

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-130
Pyrene-d10	98		30-130
Benzo(b)fluoranthene-d12	108		30-130

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-02
Client ID: E13D-082812
Sample Location: CSLP-REILLY SITE
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/05/12 18:34
Analyst: CM

Date Collected: 08/28/12 07:00
Date Received: 08/30/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	120		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	16.4		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-02
 Client ID: E13D-082812
 Sample Location: CSLP-REILLY SITE

Date Collected: 08/28/12 07:00
 Date Received: 08/30/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-130
Pyrene-d10	98		30-130
Benzo(b)fluoranthene-d12	107		30-130

Project Name: Not Specified

Lab Number: L1215521

Project Number: Not Specified

Report Date: 09/14/12

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM
 Analytical Date: 09/05/12 16:25
 Analyst: CM

Extraction Method: EPA 3510C
 Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG558504-1					
Naphthalene	ND		ng/l	10.0	--
1,4-Dichlorobenzene	ND		ng/l	10.0	--
2-Methylnaphthalene	ND		ng/l	10.0	--
1-Methylnaphthalene	ND		ng/l	10.0	--
Dibenzothiophene	ND		ng/l	10.0	--
2-Chloronaphthalene	ND		ng/l	10.0	--
Biphenyl	ND		ng/l	10.0	--
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--
Acenaphthylene	ND		ng/l	10.0	--
Acenaphthene	ND		ng/l	10.0	--
Fluorene	ND		ng/l	10.0	--
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--
Phenanthrene	ND		ng/l	10.0	--
Anthracene	ND		ng/l	10.0	--
1-Methylphenanthrene	ND		ng/l	10.0	--
Fluoranthene	ND		ng/l	10.0	--
Pyrene	ND		ng/l	10.0	--
Benz(a)anthracene	ND		ng/l	10.0	--
Chrysene	ND		ng/l	10.0	--
Benzo(b)fluoranthene	ND		ng/l	10.0	--
Benzo(k)fluoranthene	ND		ng/l	10.0	--
Benzo(e)Pyrene	ND		ng/l	10.0	--
Benzo(a)pyrene	ND		ng/l	10.0	--
Perylene	ND		ng/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--
Dibenz(a,h)anthracene	ND		ng/l	10.0	--
Benzo(ghi)perylene	ND		ng/l	10.0	--

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**Method Blank Analysis**
Batch Quality Control**Analytical Method:** 1,8270D-SIM
Analytical Date: 09/05/12 16:25
Analyst: CM**Extraction Method:** EPA 3510C
Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG558504-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	89		30-130
Pyrene-d10	101		30-130
Benzo(b)fluoranthene-d12	114		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1215521

Report Date: 09/14/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG558504-2 WG558504-3								
Naphthalene	80		82		40-140	2		30
2-Methylnaphthalene	85		86		40-140	1		30
Acenaphthylene	82		84		40-140	2		30
Acenaphthene	86		88		40-140	2		30
Fluorene	87		88		40-140	1		30
Phenanthrene	90		89		40-140	1		30
Anthracene	89		90		40-140	1		30
Fluoranthene	92		92		40-140	0		30
Pyrene	89		91		40-140	2		30
Benz(a)anthracene	92		95		40-140	3		30
Chrysene	91		92		40-140	1		30
Benzo(b)fluoranthene	110		110		40-140	0		30
Benzo(k)fluoranthene	94		94		40-140	0		30
Benzo(a)pyrene	96		98		40-140	2		30
Indeno(1,2,3-cd)Pyrene	109		105		40-140	4		30
Dibenz(a,h)anthracene	104		99		40-140	5		30
Benzo(ghi)perylene	100		96		40-140	4		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: Not Specified

Project Number: Not Specified

Lab Number: L1215521

Report Date: 09/14/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG558504-2 WG558504-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	86		87		30-130
Pyrene-d10	93		94		30-130
Benzo(b)fluoranthene-d12	103		102		30-130

Project Name: Not Specified

Lab Number: L1215521

Project Number: Not Specified

Report Date: 09/14/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal**Cooler**

A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1215521-01A	Amber 1000ml unpreserved	A	7	2.6	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1215521-01B	Amber 1000ml unpreserved	A	7	2.6	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1215521-02A	Amber 1000ml unpreserved	A	7	2.6	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1215521-02B	Amber 1000ml unpreserved	A	7	2.6	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1215521
Report Date: 09/14/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**Data Qualifiers**

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: Not Specified
Project Number: Not Specified

Lab Number: L1215521
Report Date: 09/14/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **TO-15**: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

**DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA**

**ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. L1215521**

Analyses Performed

By:

**Alpha Analytical
Westborough, MA**

For:

**Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota**

February 27, 2013

Reilly\L1215521-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Alpha Analytical for two aqueous samples from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. L1215521 in a single data package. The following samples were reported:

E13-082812

E13D-082812

Based on the validation effort, all results were determined to be valid as reported.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270D SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of August 28, 2012. The samples were shipped via FedEx and received by the laboratory on August 30, 2012. The temperature of the cooler on receipt at the laboratory was noted on the COC and was acceptable (2.6° C; criteria 4.0° C \pm 2.0° C). Samples were extracted on September 4, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on September 5, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "PAH5". Three Decafluorotriphenylphosphine (DFTPP) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Each of the performance checks were documented and were acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for several in several standards. The data package included the manual integration results for 10 ng/ml and 500 ng/ml standards. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on August 23, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed on August 27, 2012. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 18 of the 27 target compounds. The laboratory was contacted. The lab replied: "For the ICV – we were in the process of getting our custom standards in to support this new request for us to report this "full" list of targets. While we had the 18 main PAHs, and other PAHs and individual compounds in house, we were not able to formulate a complete ICV mixture, so we ran with what we had available at the time. We now have a full list ICV to support all of the targets.' It

should be noted that NELAC Certification requires “all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

One CC standards was analyzed in association with these samples. Reported relative response factors (RRFs) and percent differences (%D) met acceptance criteria.

IV. Blanks

One laboratory method blank was analyzed in support of these samples. No target analytes were detected in the method blank.

V. Surrogate Compound Recovery

Recoveries of all surrogate compounds were correctly calculated, accurately reported.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

An MS/MSD was not performed with this data set.

B. Laboratory Control Sample (LCS)

Results for one LCS and LCS Duplicate were provided in the data package. All recoveries were acceptable.

VII. Field Duplicate

Sample E13D-082812 was collected as a field duplicate of sample E13-082812. Precision between paired samples met acceptance criterion ($\leq 25\%$ RPD if both samples are $>5X$ RL).

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limit for pyrene. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issue was observed:

- Detailed spectra for analytes that were manually integrated in the IC were not provided in the laboratory report. The laboratory was contacted and supplied the missing information electronically. All manual integrations were acceptable.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: August 28, 2012

Job No. L1215521

ddms Project No. 2006-0022

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-01
Client ID: E13-082812
Sample Location: CSLP-REILLY SITE
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/05/12 18:02
Analyst: CM

Date Collected: 08/28/12 07:00
Date Received: 08/30/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	120		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	16.4		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-01

Date Collected: 08/28/12 07:00

Client ID: E13-082812

Date Received: 08/30/12

Sample Location: CSLP-REILLY SITE

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	85		30-130
Pyrene-d10	98		30-130
Benzo(b)fluoranthene-d12	108		30-130

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-02
Client ID: E13D-082812
Sample Location: CSLP-REILLY SITE
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/05/12 18:34
Analyst: CM

Date Collected: 08/28/12 07:00
Date Received: 08/30/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/04/12 09:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	120		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	16.4		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: Not Specified**Lab Number:** L1215521**Project Number:** Not Specified**Report Date:** 09/14/12**SAMPLE RESULTS**

Lab ID: L1215521-02
 Client ID: E13D-082812
 Sample Location: CSLP-REILLY SITE

Date Collected: 08/28/12 07:00
 Date Received: 08/30/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	84		30-130
Pyrene-d10	98		30-130
Benzo(b)fluoranthene-d12	107		30-130



ANALYTICAL REPORT

Lab Number:	L1216844
Client:	Summit Envirosolutions Inc 1217 Bandana Blvd St. Paul, MN 55108
ATTN:	Bill Gregg
Phone:	(651) 262-4236
Project Name:	REILLY SITE
Project Number:	0987-0009-600
Report Date:	10/01/12

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1216844-01	0987-0009-W105	ST. LOUIS PARK, MN	09/19/12 08:40
L1216844-02	0987-0009-SLP6	ST. LOUIS PARK, MN	09/19/12 13:21
L1216844-03	0987-0009-W23	ST. LOUIS PARK, MN	09/19/12 08:50
L1216844-04	0987-0009-E7	ST. LOUIS PARK, MN	09/19/12 12:35
L1216844-05	0987-0009-E7D	ST. LOUIS PARK, MN	09/19/12 12:35
L1216844-06	0987-0009-E7FB	ST. LOUIS PARK, MN	09/19/12 12:35

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Case Narrative (continued)

PAHs by GC/MS-SIM

The WG563219-5 MS/MSD RPD, performed on L1216844-04, is above the acceptance criteria for 1,4-Dichlorobenzene (36%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cynthia McQueen

Title: Technical Director/Representative

Date: 10/01/12

ORGANICS

SEMIVOLATILES

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-01
Client ID: 0987-0009-W105
Sample Location: ST. LOUIS PARK, MN
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/28/12 17:09
Analyst: JD

Date Collected: 09/19/12 08:40
Date Received: 09/20/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	24.9		ng/l	10.1	--	1
1,4-Dichlorobenzene	ND		ng/l	10.1	--	1
2-Methylnaphthalene	11.9		ng/l	10.1	--	1
1-Methylnaphthalene	22.7		ng/l	10.1	--	1
Dibenzothiophene	10.3		ng/l	10.1	--	1
2-Chloronaphthalene	ND		ng/l	10.1	--	1
Biphenyl	19.2		ng/l	10.1	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.1	--	1
Acenaphthylene	ND		ng/l	10.1	--	1
Acenaphthene	86.5		ng/l	10.1	--	1
Fluorene	64.6		ng/l	10.1	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.1	--	1
Phenanthrene	58.0		ng/l	10.1	--	1
Anthracene	12.5		ng/l	10.1	--	1
1-Methylphenanthrene	10.7		ng/l	10.1	--	1
Fluoranthene	202		ng/l	10.1	--	1
Pyrene	177		ng/l	10.1	--	1
Benz(a)anthracene	28.3		ng/l	10.1	--	1
Chrysene	16.1		ng/l	10.1	--	1
Benzo(b)fluoranthene	ND		ng/l	10.1	--	1
Benzo(k)fluoranthene	ND		ng/l	10.1	--	1
Benzo(e)Pyrene	ND		ng/l	10.1	--	1
Benzo(a)pyrene	ND		ng/l	10.1	--	1
Perylene	ND		ng/l	10.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.1	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.1	--	1
Benzo(ghi)perylene	ND		ng/l	10.1	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-01
 Client ID: 0987-0009-W105
 Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 08:40
 Date Received: 09/20/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	66		30-130
Pyrene-d10	87		30-130
Benzo(b)fluoranthene-d12	96		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-02
 Client ID: 0987-0009-SLP6
 Sample Location: ST. LOUIS PARK, MN
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 09/28/12 17:40
 Analyst: JD

Date Collected: 09/19/12 13:21
 Date Received: 09/20/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	ND		ng/l	10.0	--	1
1-Methylnaphthalene	ND		ng/l	10.0	--	1
Dibenzothiophene	ND		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	ND		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--	1
Acenaphthylene	ND		ng/l	10.0	--	1
Acenaphthene	57.3		ng/l	10.0	--	1
Fluorene	ND		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--	1
Phenanthrene	ND		ng/l	10.0	--	1
Anthracene	ND		ng/l	10.0	--	1
1-Methylphenanthrene	ND		ng/l	10.0	--	1
Fluoranthene	ND		ng/l	10.0	--	1
Pyrene	ND		ng/l	10.0	--	1
Benz(a)anthracene	ND		ng/l	10.0	--	1
Chrysene	ND		ng/l	10.0	--	1
Benzo(b)fluoranthene	ND		ng/l	10.0	--	1
Benzo(k)fluoranthene	ND		ng/l	10.0	--	1
Benzo(e)Pyrene	ND		ng/l	10.0	--	1
Benzo(a)pyrene	ND		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-02
 Client ID: 0987-0009-SLP6
 Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 13:21
 Date Received: 09/20/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	64		30-130
Pyrene-d10	83		30-130
Benzo(b)fluoranthene-d12	93		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-03
Client ID: 0987-0009-W23
Sample Location: ST. LOUIS PARK, MN
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 09/28/12 18:11
Analyst: JD

Date Collected: 09/19/12 08:50
Date Received: 09/20/12
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	1700		ng/l	10.0	--	1
1,4-Dichlorobenzene	ND		ng/l	10.0	--	1
2-Methylnaphthalene	765		ng/l	10.0	--	1
1-Methylnaphthalene	1170		ng/l	10.0	--	1
Dibenzothiophene	367		ng/l	10.0	--	1
2-Chloronaphthalene	ND		ng/l	10.0	--	1
Biphenyl	531		ng/l	10.0	--	1
2,6-Dimethylnaphthalene	291		ng/l	10.0	--	1
Acenaphthylene	128		ng/l	10.0	--	1
Acenaphthene	2910		ng/l	10.0	--	1
Fluorene	2400		ng/l	10.0	--	1
2,3,5-Trimethylnaphthalene	98.6		ng/l	10.0	--	1
Phenanthrene	1250		ng/l	10.0	--	1
Anthracene	179		ng/l	10.0	--	1
1-Methylphenanthrene	147		ng/l	10.0	--	1
Fluoranthene	1470		ng/l	10.0	--	1
Pyrene	1380		ng/l	10.0	--	1
Benz(a)anthracene	234		ng/l	10.0	--	1
Chrysene	138		ng/l	10.0	--	1
Benzo(b)fluoranthene	51.5		ng/l	10.0	--	1
Benzo(k)fluoranthene	57.2		ng/l	10.0	--	1
Benzo(e)Pyrene	37.9		ng/l	10.0	--	1
Benzo(a)pyrene	47.7		ng/l	10.0	--	1
Perylene	ND		ng/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.0	--	1
Benzo(ghi)perylene	ND		ng/l	10.0	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-03
 Client ID: 0987-0009-W23
 Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 08:50
 Date Received: 09/20/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		30-130
Pyrene-d10	87		30-130
Benzo(b)fluoranthene-d12	95		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-04
 Client ID: 0987-0009-E7
 Sample Location: ST. LOUIS PARK, MN
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 09/28/12 18:43
 Analyst: JD

Date Collected: 09/19/12 12:35
 Date Received: 09/20/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.1	--	1
1,4-Dichlorobenzene	ND		ng/l	10.1	--	1
2-Methylnaphthalene	ND		ng/l	10.1	--	1
1-Methylnaphthalene	ND		ng/l	10.1	--	1
Dibenzothiophene	ND		ng/l	10.1	--	1
2-Chloronaphthalene	ND		ng/l	10.1	--	1
Biphenyl	ND		ng/l	10.1	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.1	--	1
Acenaphthylene	ND		ng/l	10.1	--	1
Acenaphthene	ND		ng/l	10.1	--	1
Fluorene	ND		ng/l	10.1	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.1	--	1
Phenanthrene	ND		ng/l	10.1	--	1
Anthracene	ND		ng/l	10.1	--	1
1-Methylphenanthrene	ND		ng/l	10.1	--	1
Fluoranthene	ND		ng/l	10.1	--	1
Pyrene	ND		ng/l	10.1	--	1
Benz(a)anthracene	ND		ng/l	10.1	--	1
Chrysene	ND		ng/l	10.1	--	1
Benzo(b)fluoranthene	ND		ng/l	10.1	--	1
Benzo(k)fluoranthene	ND		ng/l	10.1	--	1
Benzo(e)Pyrene	ND		ng/l	10.1	--	1
Benzo(a)pyrene	ND		ng/l	10.1	--	1
Perylene	ND		ng/l	10.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.1	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.1	--	1
Benzo(ghi)perylene	ND		ng/l	10.1	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-04
 Client ID: 0987-0009-E7
 Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 12:35
 Date Received: 09/20/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	76		30-130
Pyrene-d10	89		30-130
Benzo(b)fluoranthene-d12	98		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-05
 Client ID: 0987-0009-E7D
 Sample Location: ST. LOUIS PARK, MN
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 09/28/12 20:16
 Analyst: JD

Date Collected: 09/19/12 12:35
 Date Received: 09/20/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	10.1	--	1
1,4-Dichlorobenzene	ND		ng/l	10.1	--	1
2-Methylnaphthalene	ND		ng/l	10.1	--	1
1-Methylnaphthalene	ND		ng/l	10.1	--	1
Dibenzothiophene	ND		ng/l	10.1	--	1
2-Chloronaphthalene	ND		ng/l	10.1	--	1
Biphenyl	ND		ng/l	10.1	--	1
2,6-Dimethylnaphthalene	ND		ng/l	10.1	--	1
Acenaphthylene	ND		ng/l	10.1	--	1
Acenaphthene	ND		ng/l	10.1	--	1
Fluorene	ND		ng/l	10.1	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.1	--	1
Phenanthrene	ND		ng/l	10.1	--	1
Anthracene	ND		ng/l	10.1	--	1
1-Methylphenanthrene	ND		ng/l	10.1	--	1
Fluoranthene	ND		ng/l	10.1	--	1
Pyrene	ND		ng/l	10.1	--	1
Benz(a)anthracene	ND		ng/l	10.1	--	1
Chrysene	ND		ng/l	10.1	--	1
Benzo(b)fluoranthene	ND		ng/l	10.1	--	1
Benzo(k)fluoranthene	ND		ng/l	10.1	--	1
Benzo(e)Pyrene	ND		ng/l	10.1	--	1
Benzo(a)pyrene	ND		ng/l	10.1	--	1
Perylene	ND		ng/l	10.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.1	--	1
Dibenz(a,h)anthracene	ND		ng/l	10.1	--	1
Benzo(ghi)perylene	ND		ng/l	10.1	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-05
 Client ID: 0987-0009-E7D
 Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 12:35
 Date Received: 09/20/12
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		30-130
Pyrene-d10	85		30-130
Benzo(b)fluoranthene-d12	94		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-06
 Client ID: 0987-0009-E7FB
 Sample Location: ST. LOUIS PARK, MN
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 09/28/12 20:47
 Analyst: JD

Date Collected: 09/19/12 12:35
 Date Received: 09/20/12
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Mansfield Lab						
Naphthalene	ND		ng/l	11.1	--	1
1,4-Dichlorobenzene	ND		ng/l	11.1	--	1
2-Methylnaphthalene	ND		ng/l	11.1	--	1
1-Methylnaphthalene	ND		ng/l	11.1	--	1
Dibenzothiophene	ND		ng/l	11.1	--	1
2-Chloronaphthalene	ND		ng/l	11.1	--	1
Biphenyl	ND		ng/l	11.1	--	1
2,6-Dimethylnaphthalene	ND		ng/l	11.1	--	1
Acenaphthylene	ND		ng/l	11.1	--	1
Acenaphthene	ND		ng/l	11.1	--	1
Fluorene	ND		ng/l	11.1	--	1
2,3,5-Trimethylnaphthalene	ND		ng/l	11.1	--	1
Phenanthrene	ND		ng/l	11.1	--	1
Anthracene	ND		ng/l	11.1	--	1
1-Methylphenanthrene	ND		ng/l	11.1	--	1
Fluoranthene	ND		ng/l	11.1	--	1
Pyrene	ND		ng/l	11.1	--	1
Benz(a)anthracene	ND		ng/l	11.1	--	1
Chrysene	ND		ng/l	11.1	--	1
Benzo(b)fluoranthene	ND		ng/l	11.1	--	1
Benzo(k)fluoranthene	ND		ng/l	11.1	--	1
Benzo(e)Pyrene	ND		ng/l	11.1	--	1
Benzo(a)pyrene	ND		ng/l	11.1	--	1
Perylene	ND		ng/l	11.1	--	1
Indeno(1,2,3-cd)Pyrene	ND		ng/l	11.1	--	1
Dibenz(a,h)anthracene	ND		ng/l	11.1	--	1
Benzo(ghi)perylene	ND		ng/l	11.1	--	1

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

SAMPLE RESULTS

Lab ID: L1216844-06
Client ID: 0987-0009-E7FB
Sample Location: ST. LOUIS PARK, MN

Date Collected: 09/19/12 12:35
Date Received: 09/20/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs by GC/MS-SIM - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	67		30-130
Pyrene-d10	86		30-130
Benzo(b)fluoranthene-d12	94		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/28/12 12:27
Analyst: JD

Extraction Method: EPA 3510C
Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL
PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-06 Batch: WG563219-1					
Naphthalene	ND		ng/l	10.0	--
1,4-Dichlorobenzene	ND		ng/l	10.0	--
2-Methylnaphthalene	ND		ng/l	10.0	--
1-Methylnaphthalene	ND		ng/l	10.0	--
Dibenzothiophene	ND		ng/l	10.0	--
2-Chloronaphthalene	ND		ng/l	10.0	--
Biphenyl	ND		ng/l	10.0	--
2,6-Dimethylnaphthalene	ND		ng/l	10.0	--
Acenaphthylene	ND		ng/l	10.0	--
Acenaphthene	ND		ng/l	10.0	--
Fluorene	ND		ng/l	10.0	--
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	--
Phenanthrene	ND		ng/l	10.0	--
Anthracene	ND		ng/l	10.0	--
1-Methylphenanthrene	ND		ng/l	10.0	--
Fluoranthene	ND		ng/l	10.0	--
Pyrene	ND		ng/l	10.0	--
Benz(a)anthracene	ND		ng/l	10.0	--
Chrysene	ND		ng/l	10.0	--
Benzo(b)fluoranthene	ND		ng/l	10.0	--
Benzo(k)fluoranthene	ND		ng/l	10.0	--
Benzo(e)Pyrene	ND		ng/l	10.0	--
Benzo(a)pyrene	ND		ng/l	10.0	--
Perylene	ND		ng/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ng/l	10.0	--
Dibenz(a,h)anthracene	ND		ng/l	10.0	--
Benzo(ghi)perylene	ND		ng/l	10.0	--

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 09/28/12 12:27
Analyst: JD

Extraction Method: EPA 3510C
Extraction Date: 09/26/12 11:00

Parameter	Result	Qualifier	Units	RL	MDL
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PAHs by GC/MS-SIM - Mansfield Lab for sample(s): 01-06	Batch:	WG563219-1
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Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Methylnaphthalene-d10	69		30-130
Pyrene-d10	87		30-130
Benzo(b)fluoranthene-d12	99		30-130

Lab Control Sample Analysis Batch Quality Control

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG563219-2 WG563219-3								
Naphthalene	59		57		40-140	3		30
1,4-Dichlorobenzene	45		44		40-140	2		30
2-Methylnaphthalene	60		57		40-140	5		30
1-Methylnaphthalene	63		59		40-140	7		30
Dibenzothiophene	77		75		40-140	3		30
2-Chloronaphthalene	62		57		40-140	8		30
Biphenyl	64		59		40-140	8		30
2,6-Dimethylnaphthalene	60		54		40-140	11		30
Acenaphthylene	73		68		40-140	7		30
Acenaphthene	67		62		40-140	8		30
Fluorene	74		70		40-140	6		30
2,3,5-Trimethylnaphthalene	60		56		40-140	7		30
Phenanthrene	79		76		40-140	4		30
Anthracene	73		72		40-140	1		30
1-Methylphenanthrene	84		83		40-140	1		30
Fluoranthene	84		84		40-140	0		30
Pyrene	82		81		40-140	1		30
Benz(a)anthracene	89		89		40-140	0		30
Chrysene	82		83		40-140	1		30
Benzo(b)fluoranthene	92		93		40-140	1		30
Benzo(k)fluoranthene	92		92		40-140	0		30

Lab Control Sample Analysis Batch Quality Control

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-06 Batch: WG563219-2 WG563219-3								
Benzo(e)Pyrene	90		89		40-140	1		30
Benzo(a)pyrene	91		92		40-140	1		30
Perylene	84		85		40-140	1		30
Indeno(1,2,3-cd)Pyrene	106		106		40-140	0		30
Dibenz(a,h)anthracene	96		97		40-140	1		30
Benzo(ghi)perylene	92		93		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Methylnaphthalene-d10	66		62		30-130
Pyrene-d10	84		83		30-130
Benzo(b)fluoranthene-d12	94		94		30-130

Matrix Spike Analysis

Batch Quality Control

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG563219-4 WG563219-5 QC Sample: L1216844-04 Client ID: 0987-0009-E7

Naphthalene	ND	2520	1940	77		1600	63		40-140	19		30
1,4-Dichlorobenzene	ND	2520	1820	72		1260	50		40-140	36	Q	30
2-Methylnaphthalene	ND	2520	2010	80		1640	65		40-140	20		30
1-Methylnaphthalene	ND	2520	2050	81		1690	67		40-140	19		30
Dibenzothiophene	ND	2520	2180	86		2090	83		40-140	4		30
2-Chloronaphthalene	ND	2520	1960	78		1640	65		40-140	18		30
Biphenyl	ND	2520	2000	79		1720	68		40-140	15		30
2,6-Dimethylnaphthalene	ND	2520	2070	82		1680	66		40-140	21		30
Acenaphthylene	ND	2520	2160	86		1960	78		40-140	10		30
Acenaphthene	ND	2520	1980	78		1770	70		40-140	11		30
Fluorene	ND	2520	2150	85		2000	79		40-140	7		30
2,3,5-Trimethylnaphthalene	ND	2520	2120	84		1760	70		40-140	19		30
Phenanthrene	ND	2520	2250	89		2120	84		40-140	6		30
Anthracene	ND	2520	2160	86		2080	82		40-140	4		30
1-Methylphenanthrene	ND	2520	2240	89		2200	87		40-140	2		30
Fluoranthene	ND	2520	2220	88		2220	88		40-140	0		30
Pyrene	ND	2520	2170	86		2120	84		40-140	2		30
Benz(a)anthracene	ND	2520	2370	94		2360	94		40-140	0		30
Chrysene	ND	2520	2060	82		2070	82		40-140	0		30
Benzo(b)fluoranthene	ND	2520	2500	99		2570	102		40-140	3		30
Benzo(k)fluoranthene	ND	2520	2030	80		2040	81		40-140	0		30

Matrix Spike Analysis

Batch Quality Control

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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PAHs by GC/MS-SIM - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG563219-4 WG563219-5 QC Sample: L1216844-04 Client ID: 0987-0009-E7

Benzo(e)Pyrene	ND	2520	2240	89		2280	90		40-140	2		30
Benzo(a)pyrene	ND	2520	2370	94		2360	94		40-140	0		30
Perylene	ND	2520	2140	85		2160	86		40-140	1		30
Indeno(1,2,3-cd)Pyrene	ND	2520	2660	105		2660	105		40-140	0		30
Dibenz(a,h)anthracene	ND	2520	2420	96		2420	96		40-140	0		30
Benzo(ghi)perylene	ND	2520	2350	93		2370	94		40-140	1		30

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
2-Methylnaphthalene-d10	80		66		30-130
Benzo(b)fluoranthene-d12	92		94		30-130
Pyrene-d10	86		86		30-130

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

B Present/Intact
A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1216844-01A	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-01B	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-02A	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-02B	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-03A	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-03B	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04A	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04B	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04C	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04D	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04E	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-04F	Amber 1000ml unpreserved	B	7	2.3	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-05A	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-05B	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-06A	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)
L1216844-06B	Amber 1000ml unpreserved	A	7	2.1	Y	Present/Intact	A2-PAH-8270SIM-FULL(7)

*Values in parentheses indicate holding time in days



Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: REILLY SITE
Project Number: 0987-0009-600

Lab Number: L1216844
Report Date: 10/01/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **TO-15**: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.



MANSFIELD CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: Summit. EnviroSolutions
Address: 1217 Bandana Blvd N
St. Paul, MN, 55108
Phone: 651-262-4236
Fax:

Email: bgregg@summite.com

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

PLEASE NOTE

MS/MSD (at unit cost) will be omitted unless you check here: ☒

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials										
		Date	Time												
1	0987-0009-W105	9/19/12	8:40	Water	RLA	x									
2	0987-0009-SLPG	9/19/12	13:21		RLA	x									
3	0987-0009-W23	9/19/12	8:50		RLA	x									
4	0987-0009-E7	9/19/12	12:35		RLA	x									
5	0987-0009-E7D	9/19/12	12:35		RLA	x									
4	0987-0009-E7MS	9/19/12	12:35		RLA	x									
↓	0987-0009-E7MSD	9/19/12	12:35		RLA	x									
6	0987-0009-E7FB	9/19/12	12:35		RLA	x									

Project Information

Project Name: Reilly Site
Project Location: St. Louis Park, MN

Project #: 0987-0009

Project Manager: Bill Gregg

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Time:

Date Rec'd in Lab:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

ALPHA Job #: L1216844

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program

Criteria

ANALYSIS
PAH

SAMPLE HANDLING

Filtration _____
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do

(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

Container Type

1 L Amber x 2

Preservative

None

Relinquished By:

Neyan Anderson
FEA Ex

Date/Time

9/19/12 14:30
9/20/12 10:00

Received By:

FEA Ex
[Signature]

Date/Time

9/20/12 10:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-27039-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

1217 Bandana Blvd North

Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

4/20/2012 12:53:30 PM

Lisa Uriell

Project Manager II

lisa.uriell@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Job ID: 280-27039-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-27039-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Four samples were received under chain of custody on March 27, 2012. The samples were received at temperatures of 4.0°C, 4.3°C, 5.1°C, 4.1°C and 2.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

SLP10T-032612 (280-27039-1) had an initial volume of 3782.1 mL

W48-032612 (280-27039-2) had an initial volume of 3567.2 mL

W48D-032612 (280-27037-3) had an initial volume of 3870.1 mL

W48FB-032612 (280-27037-4) had an initial volume of 3803.1 mL

Surrogate Chrysene-d12 was recovered below the QC control limits (28-101%) in sample W48-032612 (280-27039-2) at 26%. Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered slightly above the QC control limits (23-84%) in the method blank associated with prep batch 280-113850 at 85%. This is an indicator that data may be biased high. As no detectable concentrations are present in the method blank, corrective action is deemed unnecessary. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

The LCS associated with prep batch 280-113850 exhibited the percent recovery below the QC control limits for Acridine at 7% (limits 30-150%). The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

The MS/MSD associated with prep batch 280-113850 was performed using sample W48-032612 (280-27039-2), as requested.

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Job ID: 280-27039-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)pyrene	Indeno[1,2,3-cd]pyrene	Perylene

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-27039-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	2
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	12	11
Samples and QC Internal Standard Area	24	24
TOTAL	169	164
% Completeness	97.0%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-27039-1					
Sample: W48-032612			DUP: W48D-032612		
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	89	Acenaphthene	88	1.1	
Acenaphthylene	3.4	Acenaphthylene	3.4	0.0	
Acridine	9.9	Acridine	11	10.5	
Anthracene	5.8	Anthracene	7.4	24.2	
Benzo(a)anthracene	ND	Benzo(a)anthracene	3.5	NC	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	2.1	NC	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	2.0	NC	
2,3-Benzofuran	1.5	2,3-Benzofuran	1.4	6.9	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	8.2	Benzo(b)thiophene	7.9	3.7	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	2.2	Carbazole	4.0	58.1	p
Chrysene	ND	Chrysene	2.8	NC	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	4.6	2,3-Dihydroindene	4.2	9.1	
Fluoranthene	ND	Fluoranthene	3.2	NC	
Fluorene	ND	Fluorene	0.94	NC	
Indene	26	Indene	25	3.9	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	2.2	2-Methylnaphthalene	2.0	9.5	
1-Methylnaphthalene	2.2	1-Methylnaphthalene	1.9	14.6	
Naphthalene	7.0	Naphthalene	7.5	6.9	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	3.6	NC	
Pyrene	3.9	Pyrene	5.9	40.8	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612

Lab Sample ID: 280-27039-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	24		5.3	0.74	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	3.9	J	5.9	0.94	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.2	J	6.2	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	14		6.0	0.53	ng/L	1		8270C	Total/NA
Acenaphthylene	0.91	J	5.1	0.81	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	2.1	J	5.5	0.79	ng/L	1		8270C	Total/NA
Dibenzofuran	1.6	J	6.0	1.0	ng/L	1		8270C	Total/NA
Fluorene	2.2	J	4.3	0.90	ng/L	1		8270C	Total/NA
Indole	1.9	J	5.0	1.8	ng/L	1		8270C	Total/NA
Naphthalene	9.5		9.1	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: W48-032612

Lab Sample ID: 280-27039-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.5	J	6.1	0.76	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	4.6	J	5.6	0.78	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	2.2	J	6.3	1.0	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.2	J	6.6	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	89		6.4	0.56	ng/L	1		8270C	Total/NA
Acenaphthylene	3.4	J	5.4	0.86	ng/L	1		8270C	Total/NA
Acridine	9.9	*	7.3	7.3	ng/L	1		8270C	Total/NA
Anthracene	5.8		4.7	0.90	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	8.2		5.8	0.84	ng/L	1		8270C	Total/NA
Carbazole	2.2	J	4.3	0.81	ng/L	1		8270C	Total/NA
Indene	26		5.3	3.7	ng/L	1		8270C	Total/NA
Naphthalene	7.0	J	9.6	1.3	ng/L	1		8270C	Total/NA
Pyrene	3.9	J	4.7	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: W48D-032612

Lab Sample ID: 280-27039-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.4	J	5.6	0.70	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	4.2	J	5.2	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.9	J	5.8	0.92	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.0	J	6.1	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	88		5.9	0.52	ng/L	1		8270C	Total/NA
Acenaphthylene	3.4	J	5.0	0.80	ng/L	1		8270C	Total/NA
Acridine	11	*	6.7	6.7	ng/L	1		8270C	Total/NA
Anthracene	7.4		4.3	0.83	ng/L	1		8270C	Total/NA
Benzo[a]anthracene	3.5	J	4.4	0.95	ng/L	1		8270C	Total/NA
Benzo[b]fluoranthene	2.1	J	4.9	1.4	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	7.9		5.4	0.78	ng/L	1		8270C	Total/NA
Benzo[k]fluoranthene	2.0	J	4.2	1.3	ng/L	1		8270C	Total/NA
Carbazole	4.0		3.9	0.74	ng/L	1		8270C	Total/NA
Chrysene	2.8	J	5.8	1.3	ng/L	1		8270C	Total/NA
Fluoranthene	3.2	J	4.8	1.7	ng/L	1		8270C	Total/NA
Fluorene	0.94	J	4.2	0.88	ng/L	1		8270C	Total/NA
Indene	25		4.9	3.4	ng/L	1		8270C	Total/NA
Naphthalene	7.5	J	8.9	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	3.6	J	6.5	3.3	ng/L	1		8270C	Total/NA
Pyrene	5.9		4.3	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: W48FB-032612

Lab Sample ID: 280-27039-4

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48FB-032612 (Continued)

Lab Sample ID: 280-27039-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	0.80	J	5.3	0.74	ng/L	1		8270C	Total/NA
Naphthalene	5.3	J	9.0	1.2	ng/L	1		8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-27039-1	SLP10T-032612	Water	03/26/12 12:20	03/27/12 09:00
280-27039-2	W48-032612	Water	03/26/12 13:20	03/27/12 09:00
280-27039-3	W48D-032612	Water	03/26/12 13:35	03/27/12 09:00
280-27039-4	W48FB-032612	Water	03/26/12 13:40	03/27/12 09:00

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612

Lab Sample ID: 280-27039-1

Date Collected: 03/26/12 12:20

Matrix: Water

Date Received: 03/27/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		04/01/12 13:00	04/17/12 17:44	1
2,3-Dihydroindene	24		5.3	0.74	ng/L		04/01/12 13:00	04/17/12 17:44	1
1-Methylnaphthalene	3.9	J	5.9	0.94	ng/L		04/01/12 13:00	04/17/12 17:44	1
2-Methylnaphthalene	2.2	J	6.2	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acenaphthene	14		6.0	0.53	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acenaphthylene	0.91	J	5.1	0.81	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acridine	ND	*	6.9	6.9	ng/L		04/01/12 13:00	04/17/12 17:44	1
Anthracene	ND		4.4	0.85	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo(b)thiophene	2.1	J	5.5	0.79	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[g,h,i]perylene	ND		6.6	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Carbazole	ND		4.0	0.76	ng/L		04/01/12 13:00	04/17/12 17:44	1
Chrysene	ND		5.9	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenzofuran	1.6	J	6.0	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenzothiophene	ND		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Fluoranthene	ND		4.9	1.8	ng/L		04/01/12 13:00	04/17/12 17:44	1
Fluorene	2.2	J	4.3	0.90	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indene	ND		5.0	3.5	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indole	1.9	J	5.0	1.8	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Naphthalene	9.5		9.1	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Perylene	ND		4.0	4.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Phenanthrene	ND		6.7	3.4	ng/L		04/01/12 13:00	04/17/12 17:44	1
Pyrene	ND		4.4	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Quinoline	ND		9.5	6.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Biphenyl	ND		5.9	1.1	ng/L		04/01/12 13:00	04/17/12 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	82		23 - 84	04/01/12 13:00	04/17/12 17:44	1
Chrysene-d12 (Surr)	37		28 - 101	04/01/12 13:00	04/17/12 17:44	1
Naphthalene-d8 (Surr)	81		22 - 97	04/01/12 13:00	04/17/12 17:44	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48-032612

Lab Sample ID: 280-27039-2

Date Collected: 03/26/12 13:20

Matrix: Water

Date Received: 03/27/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.5	J	6.1	0.76	ng/L		04/01/12 13:00	04/17/12 18:20	1
2,3-Dihydroindene	4.6	J	5.6	0.78	ng/L		04/01/12 13:00	04/17/12 18:20	1
1-Methylnaphthalene	2.2	J	6.3	1.0	ng/L		04/01/12 13:00	04/17/12 18:20	1
2-Methylnaphthalene	2.2	J	6.6	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acenaphthene	89		6.4	0.56	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acenaphthylene	3.4	J	5.4	0.86	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acridine	9.9	*	7.3	7.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Anthracene	5.8		4.7	0.90	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[b]fluoranthene	ND		5.3	1.6	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo(b)thiophene	8.2		5.8	0.84	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[k]fluoranthene	ND		4.6	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[g,h,i]perylene	ND		7.0	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Carbazole	2.2	J	4.3	0.81	ng/L		04/01/12 13:00	04/17/12 18:20	1
Chrysene	ND		6.3	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenz(a,h)anthracene	ND		6.6	1.2	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenzofuran	ND		6.4	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenzothiophene	ND		4.6	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Fluoranthene	ND		5.2	1.9	ng/L		04/01/12 13:00	04/17/12 18:20	1
Fluorene	ND		4.6	0.95	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indene	26		5.3	3.7	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indole	ND		5.3	1.9	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indeno[1,2,3-cd]pyrene	ND		6.1	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Naphthalene	7.0	J	9.6	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Perylene	ND		4.3	4.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Phenanthrene	ND		7.1	3.6	ng/L		04/01/12 13:00	04/17/12 18:20	1
Pyrene	3.9	J	4.7	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Quinoline	ND		10	6.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Biphenyl	ND		6.3	1.2	ng/L		04/01/12 13:00	04/17/12 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	04/01/12 13:00	04/17/12 18:20	1
Chrysene-d12 (Surr)	26	X	28 - 101	04/01/12 13:00	04/17/12 18:20	1
Naphthalene-d8 (Surr)	78		22 - 97	04/01/12 13:00	04/17/12 18:20	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48D-032612

Lab Sample ID: 280-27039-3

Date Collected: 03/26/12 13:35

Matrix: Water

Date Received: 03/27/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.4	J	5.6	0.70	ng/L		04/01/12 13:00	04/17/12 20:05	1
2,3-Dihydroindene	4.2	J	5.2	0.72	ng/L		04/01/12 13:00	04/17/12 20:05	1
1-Methylnaphthalene	1.9	J	5.8	0.92	ng/L		04/01/12 13:00	04/17/12 20:05	1
2-Methylnaphthalene	2.0	J	6.1	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acenaphthene	88		5.9	0.52	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acenaphthylene	3.4	J	5.0	0.80	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acridine	11	*	6.7	6.7	ng/L		04/01/12 13:00	04/17/12 20:05	1
Anthracene	7.4		4.3	0.83	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[a]anthracene	3.5	J	4.4	0.95	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[b]fluoranthene	2.1	J	4.9	1.4	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo(b)thiophene	7.9		5.4	0.78	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[k]fluoranthene	2.0	J	4.2	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Carbazole	4.0		3.9	0.74	ng/L		04/01/12 13:00	04/17/12 20:05	1
Chrysene	2.8	J	5.8	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenzofuran	ND		5.9	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenzothiophene	ND		4.2	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Fluoranthene	3.2	J	4.8	1.7	ng/L		04/01/12 13:00	04/17/12 20:05	1
Fluorene	0.94	J	4.2	0.88	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indene	25		4.9	3.4	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indole	ND		4.9	1.8	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Naphthalene	7.5	J	8.9	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Perylene	ND		3.9	3.9	ng/L		04/01/12 13:00	04/17/12 20:05	1
Phenanthrene	3.6	J	6.5	3.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Pyrene	5.9		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Quinoline	ND		9.3	5.8	ng/L		04/01/12 13:00	04/17/12 20:05	1
Biphenyl	ND		5.8	1.1	ng/L		04/01/12 13:00	04/17/12 20:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	04/01/12 13:00	04/17/12 20:05	1
Chrysene-d12 (Surr)	39		28 - 101	04/01/12 13:00	04/17/12 20:05	1
Naphthalene-d8 (Surr)	71		22 - 97	04/01/12 13:00	04/17/12 20:05	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48FB-032612

Lab Sample ID: 280-27039-4

Date Collected: 03/26/12 13:40

Matrix: Water

Date Received: 03/27/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		04/01/12 13:00	04/17/12 20:40	1
2,3-Dihydroindene	0.80	J	5.3	0.74	ng/L		04/01/12 13:00	04/17/12 20:40	1
1-Methylnaphthalene	ND		5.9	0.94	ng/L		04/01/12 13:00	04/17/12 20:40	1
2-Methylnaphthalene	ND		6.2	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acenaphthene	ND		6.0	0.53	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acenaphthylene	ND		5.0	0.81	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acridine	ND	*	6.8	6.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Anthracene	ND		4.4	0.84	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo(b)thiophene	ND		5.5	0.79	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[g,h,i]perylene	ND		6.5	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Carbazole	ND		4.0	0.76	ng/L		04/01/12 13:00	04/17/12 20:40	1
Chrysene	ND		5.9	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenzofuran	ND		6.0	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenzothiophene	ND		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Fluoranthene	ND		4.8	1.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Fluorene	ND		4.3	0.89	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indene	ND		4.9	3.4	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indole	ND		4.9	1.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Naphthalene	5.3	J	9.0	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Perylene	ND		4.0	4.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Phenanthrene	ND		6.6	3.4	ng/L		04/01/12 13:00	04/17/12 20:40	1
Pyrene	ND		4.4	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Quinoline	ND		9.5	5.9	ng/L		04/01/12 13:00	04/17/12 20:40	1
Biphenyl	ND		5.9	1.1	ng/L		04/01/12 13:00	04/17/12 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	77		23 - 84	04/01/12 13:00	04/17/12 20:40	1
Chrysene-d12 (Surr)	83		28 - 101	04/01/12 13:00	04/17/12 20:40	1
Naphthalene-d8 (Surr)	75		22 - 97	04/01/12 13:00	04/17/12 20:40	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-27039-1	SLP10T-032612	82	37	81
280-27039-2	W48-032612	81	26 X	78
280-27039-2 MS	W48-032612	81	51	66
280-27039-2 MSD	W48-032612	83	35	79
280-27039-3	W48D-032612	81	39	71
280-27039-4	W48FB-032612	77	83	75
LCS 280-113850/2-A	Lab Control Sample	81	85	83
MB 280-113850/1-A	Method Blank	85 X	83	82

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-113850/1-A

Matrix: Water

Analysis Batch: 116160

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		04/01/12 13:00	04/17/12 16:34	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		04/01/12 13:00	04/17/12 16:34	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		04/01/12 13:00	04/17/12 16:34	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acenaphthene	ND		5.7	0.50	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acenaphthylene	ND		4.8	0.77	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acridine	ND		6.5	6.5	ng/L		04/01/12 13:00	04/17/12 16:34	1
Anthracene	ND		4.2	0.80	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Carbazole	ND		3.8	0.72	ng/L		04/01/12 13:00	04/17/12 16:34	1
Chrysene	ND		5.6	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenzofuran	ND		5.7	0.99	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenzothiophene	ND		4.1	0.98	ng/L		04/01/12 13:00	04/17/12 16:34	1
Fluoranthene	ND		4.6	1.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Fluorene	ND		4.1	0.85	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indene	ND		4.7	3.3	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indole	ND		4.7	1.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		04/01/12 13:00	04/17/12 16:34	1
Naphthalene	ND		8.6	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1
Perylene	ND		3.8	3.8	ng/L		04/01/12 13:00	04/17/12 16:34	1
Phenanthrene	ND		6.3	3.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Pyrene	ND		4.2	0.99	ng/L		04/01/12 13:00	04/17/12 16:34	1
Quinoline	ND		9.0	5.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Biphenyl	ND		5.6	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	85	X	23 - 84	04/01/12 13:00	04/17/12 16:34	1
Chrysene-d12 (Surr)	83		28 - 101	04/01/12 13:00	04/17/12 16:34	1
Naphthalene-d8 (Surr)	82		22 - 97	04/01/12 13:00	04/17/12 16:34	1

Lab Sample ID: LCS 280-113850/2-A

Matrix: Water

Analysis Batch: 116160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	60.9		ng/L		81	30 - 150
2,3-Dihydroindene	75.0	48.6		ng/L		65	30 - 150
1-Methylnaphthalene	75.0	65.5		ng/L		87	30 - 150
2-Methylnaphthalene	75.0	63.3		ng/L		84	25 - 95
3-Methylcholanthrene	75.0	53.8		ng/L		72	30 - 150
Acenaphthene	75.0	66.4		ng/L		89	30 - 150
Acenaphthylene	75.0	65.7		ng/L		88	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-113850/2-A

Matrix: Water

Analysis Batch: 116160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	ND	*	ng/L		7	30 - 150
Anthracene	75.0	66.9		ng/L		89	30 - 150
Benzo[a]anthracene	75.0	65.2		ng/L		87	30 - 150
Benzo[a]pyrene	75.0	65.7		ng/L		88	30 - 150
Benzo[e]pyrene	75.0	67.7		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	67.5		ng/L		90	30 - 150
Benzo(b)thiophene	75.0	63.9		ng/L		85	30 - 150
Benzo[k]fluoranthene	75.0	71.0		ng/L		95	30 - 150
Benzo[g,h,i]perylene	75.0	66.9		ng/L		89	30 - 150
Carbazole	75.0	66.1		ng/L		88	30 - 150
Chrysene	75.0	70.0		ng/L		93	20 - 136
Dibenz(a,h)anthracene	75.0	67.2		ng/L		90	30 - 150
Dibenzofuran	75.0	65.8		ng/L		88	30 - 150
Dibenzothiophene	75.0	67.1		ng/L		89	30 - 150
Fluoranthene	75.0	70.6		ng/L		94	30 - 150
Fluorene	75.0	67.5		ng/L		90	34 - 96
Indene	75.0	58.4		ng/L		78	22 - 86
Indole	75.0	58.8		ng/L		78	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	62.9		ng/L		84	30 - 150
Naphthalene	75.0	65.7		ng/L		88	27 - 95
Perylene	75.0	66.6		ng/L		89	30 - 150
Phenanthrene	75.0	68.3		ng/L		91	30 - 150
Pyrene	75.0	70.9		ng/L		95	30 - 150
Quinoline	75.0	40.2		ng/L		54	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	43.5		ng/L		58	30 - 150
Biphenyl	75.0	64.7		ng/L		86	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	85		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

Lab Sample ID: 280-27039-2 MS

Matrix: Water

Analysis Batch: 116160

Client Sample ID: W48-032612

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	1.5	J	81.1	59.4		ng/L		71	30 - 150
2,3-Dihydroindene	4.6	J	81.1	52.7		ng/L		59	30 - 150
1-Methylnaphthalene	2.2	J	81.1	65.4		ng/L		78	30 - 150
2-Methylnaphthalene	2.2	J	81.1	63.6		ng/L		76	25 - 95
3-Methylcholanthrene	ND		81.1	9.19	F	ng/L		11	30 - 150
Acenaphthene	89		81.1	160		ng/L		88	30 - 150
Acenaphthylene	3.4	J	81.1	75.4		ng/L		89	30 - 150
Acridine	9.9	*	81.1	90.3		ng/L		99	30 - 150
Anthracene	5.8		81.1	87.1		ng/L		100	30 - 150
Benzo[a]anthracene	ND		81.1	43.4		ng/L		54	30 - 150
Benzo[a]pyrene	ND		81.1	9.54	F	ng/L		12	30 - 150
Benzo[e]pyrene	ND		81.1	8.79	F	ng/L		11	37 - 105

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-27039-2 MS

Matrix: Water

Analysis Batch: 116160

Client Sample ID: W48-032612

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	ND		81.1	11.2	F	ng/L		14	30 - 150
Benzo(b)thiophene	8.2		81.1	71.2		ng/L		78	30 - 150
Benzo[k]fluoranthene	ND		81.1	11.0	F	ng/L		14	30 - 150
Benzo[g,h,i]perylene	ND		81.1	3.96	J F	ng/L		5	30 - 150
Carbazole	2.2	J	81.1	82.4		ng/L		99	30 - 150
Chrysene	ND		81.1	45.6		ng/L		56	20 - 136
Dibenz(a,h)anthracene	ND		81.1	4.93	J F	ng/L		6	30 - 150
Dibenzofuran	ND		81.1	71.8		ng/L		88	30 - 150
Dibenzothiophene	ND		81.1	74.8		ng/L		92	30 - 150
Fluoranthene	ND		81.1	79.3		ng/L		98	30 - 150
Fluorene	ND		81.1	72.0		ng/L		89	34 - 96
Indene	26		81.1	83.7		ng/L		71	22 - 86
Indole	ND		81.1	76.4		ng/L		94	30 - 150
Indeno[1,2,3-cd]pyrene	ND		81.1	4.48	J F	ng/L		6	30 - 150
Naphthalene	7.0	J	81.1	71.1		ng/L		79	27 - 95
Perylene	ND		81.1	9.43	F	ng/L		12	30 - 150
Phenanthrene	ND		81.1	76.3		ng/L		94	30 - 150
Pyrene	3.9	J	81.1	82.3		ng/L		97	30 - 150
Quinoline	ND		81.1	73.6		ng/L		91	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		81.1	57.4		ng/L		71	30 - 150
Biphenyl	ND		81.1	63.9		ng/L		79	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	51		28 - 101
Naphthalene-d8 (Surr)	66		22 - 97

Lab Sample ID: 280-27039-2 MSD

Matrix: Water

Analysis Batch: 116160

Client Sample ID: W48-032612

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	1.5	J	80.1	61.7		ng/L		75	30 - 150	4	50
2,3-Dihydroindene	4.6	J	80.1	56.1		ng/L		64	30 - 150	6	50
1-Methylnaphthalene	2.2	J	80.1	65.9		ng/L		80	30 - 150	1	50
2-Methylnaphthalene	2.2	J	80.1	65.3		ng/L		79	25 - 95	3	50
3-Methylcholanthrene	ND		80.1	6.41	F	ng/L		8	30 - 150	36	50
Acenaphthene	89		80.1	159		ng/L		87	30 - 150	1	50
Acenaphthylene	3.4	J	80.1	74.1		ng/L		88	30 - 150	2	50
Acridine	9.9	*	80.1	79.6		ng/L		87	30 - 150	13	50
Anthracene	5.8		80.1	82.6		ng/L		96	30 - 150	5	50
Benzo[a]anthracene	ND		80.1	28.4		ng/L		35	30 - 150	42	50
Benzo[a]pyrene	ND		80.1	6.94	F	ng/L		9	30 - 150	32	50
Benzo[e]pyrene	ND		80.1	6.44	F	ng/L		8	37 - 105	31	50
Benzo[b]fluoranthene	ND		80.1	8.84	F	ng/L		11	30 - 150	24	50
Benzo(b)thiophene	8.2		80.1	72.0		ng/L		80	30 - 150	1	50
Benzo[k]fluoranthene	ND		80.1	8.87	F	ng/L		11	30 - 150	21	50
Benzo[g,h,i]perylene	ND		80.1	3.91	J F	ng/L		5	30 - 150	1	50
Carbazole	2.2	J	80.1	78.9		ng/L		96	30 - 150	4	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-27039-2 MSD

Matrix: Water

Analysis Batch: 116160

Client Sample ID: W48-032612

Prep Type: Total/NA

Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		80.1	30.9		ng/L		39	20 - 136	38	50
Dibenz(a,h)anthracene	ND		80.1	5.04	J F	ng/L		6	30 - 150	2	50
Dibenzofuran	ND		80.1	70.7		ng/L		88	30 - 150	2	50
Dibenzothiophene	ND		80.1	72.3		ng/L		90	30 - 150	3	50
Fluoranthene	ND		80.1	72.0		ng/L		90	30 - 150	10	50
Fluorene	ND		80.1	70.2		ng/L		88	34 - 96	3	50
Indene	26		80.1	85.4		ng/L		74	22 - 86	2	50
Indole	ND		80.1	69.2		ng/L		86	30 - 150	10	50
Indeno[1,2,3-cd]pyrene	ND		80.1	4.45	J F	ng/L		6	30 - 150	1	50
Naphthalene	7.0	J	80.1	73.2		ng/L		83	27 - 95	3	50
Perylene	ND		80.1	6.57	F	ng/L		8	30 - 150	36	50
Phenanthrene	ND		80.1	74.8		ng/L		93	30 - 150	2	50
Pyrene	3.9	J	80.1	74.8		ng/L		89	30 - 150	10	50
Quinoline	ND		80.1	72.1		ng/L		90	20 - 112	2	50
7,12-Dimethylbenz(a)anthracene	ND		80.1	55.0		ng/L		69	30 - 150	4	50
Biphenyl	ND		80.1	64.7		ng/L		81	30 - 150	1	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	35		28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

GC/MS Semi VOA

Prep Batch: 113850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-27039-1	SLP10T-032612	Total/NA	Water	3520C	
280-27039-2	W48-032612	Total/NA	Water	3520C	
280-27039-2 MS	W48-032612	Total/NA	Water	3520C	
280-27039-2 MSD	W48-032612	Total/NA	Water	3520C	
280-27039-3	W48D-032612	Total/NA	Water	3520C	
280-27039-4	W48FB-032612	Total/NA	Water	3520C	
LCS 280-113850/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-113850/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 116160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-27039-1	SLP10T-032612	Total/NA	Water	8270C	113850
280-27039-2	W48-032612	Total/NA	Water	8270C	113850
280-27039-2 MS	W48-032612	Total/NA	Water	8270C	113850
280-27039-2 MSD	W48-032612	Total/NA	Water	8270C	113850
280-27039-3	W48D-032612	Total/NA	Water	8270C	113850
280-27039-4	W48FB-032612	Total/NA	Water	8270C	113850
LCS 280-113850/2-A	Lab Control Sample	Total/NA	Water	8270C	113850
MB 280-113850/1-A	Method Blank	Total/NA	Water	8270C	113850

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612

Date Collected: 03/26/12 12:20

Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3782.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 17:44	KGV	TAL DEN

Client Sample ID: W48-032612

Date Collected: 03/26/12 13:20

Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3567.2 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 18:20	KGV	TAL DEN

Client Sample ID: W48D-032612

Date Collected: 03/26/12 13:35

Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3870.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 20:05	KGV	TAL DEN

Client Sample ID: W48FB-032612

Date Collected: 03/26/12 13:40

Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3803.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 20:40	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alabama	State Program	4	40730
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Colorado	State Program	8	N/A
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAC	4	E87667
TestAmerica Denver	Georgia	State Program	4	N/A
TestAmerica Denver	Idaho	State Program	10	CO00026
TestAmerica Denver	Illinois	NELAC	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAC	7	E-10166
TestAmerica Denver	Louisiana	NELAC	6	30785
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Maryland	State Program	3	268
TestAmerica Denver	Minnesota	NELAC	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAC	1	205310
TestAmerica Denver	New Jersey	NELAC	2	CO004
TestAmerica Denver	New Mexico	State Program	6	N/A
TestAmerica Denver	New York	NELAC	2	11964
TestAmerica Denver	North Carolina DENR	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAC	10	CO200001
TestAmerica Denver	Pennsylvania	NELAC	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002
TestAmerica Denver	Tennessee	State Program	4	TN02944
TestAmerica Denver	Texas	NELAC	6	T104704183-08-TX
TestAmerica Denver	USDA	Federal		P330-08-00036
TestAmerica Denver	Utah	NELAC	8	QUAN5
TestAmerica Denver	Washington	State Program	10	C1284
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sampler ID 40,4.3
 Temperature on Receipt 51.4/2.6
 Drinking Water? Yes ☐ No ☒

TAL-4124-280 (0508)

Custody Record

Client SUNNIT ENVIRONMENTAL SOLUTIONS Project Manager Bill Gregg Date 3/26/12 Chain of Custody Number 151473
 Address 1217 Bowdoin Blvd. N. Telephone Number (Area Code)/Fax Number 651.262.4236 Lab Number 1 of 1
 City St. Paul State MN Zip Code 55108 Site Contact Peter Bell Lab Contact Lisa Uriell

Project Name and Location (State) Reilly Site (MN) Carrier/Waybill Number Fed Ex
 Contract/Purchase Order/Quote No. 0987-0009-400

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc		
<u>SLP10T</u>	<u>3/26/12</u>		<input checked="" type="checkbox"/>					<u>6</u>					<u>X PATH PPT</u>	
<u>SLP10T - 032612</u>		<u>12:20</u>												
<u>W48 - 032612</u>		<u>13:20</u>												
<u>W48D - 032612</u>		<u>13:35</u>												
<u>W48FB - 032612</u>		<u>13:40</u>												
<u>W48MS - 032612</u>		<u>13:25</u>												
<u>W48MSD - 032612</u>		<u>13:30</u>												

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)
 Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STD
 1. Relinquished By William M. Hoff Date 3/26/12 Time 1500
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

Comments
See # 549111-115
 DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Login Number: 27039

List Source: TestAmerica Denver

List Number: 1

Creator: Cofoid, Stephen T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-27039-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2013

St. Louis Park\280-27039PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for three aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-27039-1 in a single data package. The following samples were reported:

SLP10T-032612

W48-032612

W48D-032612

W48FB-032612

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ).
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLP10T-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in W48D-032612 were qualified as estimated low (L) for detects and rejected (R).
- Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (UJ).
- Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater.
- Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L) and in W48FB-03262012 and SLP10T-03262012 were rejected (R).
- Results for benzo [a] anthracene, benzo [b] fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene in W48D-03262012 were

qualified as not detected (U) at the analyte-specific RL or the reported concentration, whichever was greater.

- The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of March 26, 2012. The samples were shipped via Federal Express and received by the laboratory on March 27, 2012. The temperature of the coolers on receipt at the laboratory was noted on the COC and was acceptable (2.6° C to 5.1° C; criteria 4.0° C \pm 2.0° C). All samples were extracted on April 1, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on April 17, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "MSS_F". Summary forms for two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on April 17, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained

from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. No target compounds were reported in the method blank. 2,3-Dihydroindene (0.80 ng/L) and naphthalene (5.3 ng/L) were reported in the field blank. Results for 2,3-dihydroindene in the field samples were sufficiently high that the amount of this analyte detected in the field blank would have no impact on the reported results. Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater, due to sample concentrations detected within five-times the concentration found in the field blank. No other target analytes were detected in the blanks.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits with the exception of chrysene-d₁₂ in W48-032612 (26%R; criteria 28-101%R). Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene were qualified as estimated (L, UJ) and may be biased low due to the low recovery of chrysene-d₁₂.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample W48-03262012. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo [a] anthracene			42	30-150 (25)	J/UJ
Benzo[a]pyrene	12	9	32	30-150 (25)	L/R
Benzo[e]pyrene	11	10	31	37-105 (25)	L/R
Benzo[b]fluoranthene	14	11		30-150 (25)	L/R
Benzo[k]fluoranthene	14	10		30-150 (25)	L/R
Benzo[g,h,i]perylene	5	5		30-150 (25)	L/R
Chrysene			38	30-150 (25)	J/UJ
Dibenz[a,h]anthracene	6	6		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	6		30-150 (25)	L/R
Perylene	12	8	35	30-150 (25)	L/R

*based on amount recovered.

Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ) because even though the MS/MSD recoveries warranted rejecting the data, the laboratory had detected the analytes in the sample, but the results were qualified as not detected (U) due to method blank contamination. Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLPT-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery. Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (J, UJ) due to the high %RSD results.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of acridine, which was reported as not detected. Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L), and results for acridine in SLP10T-032612 and W48FB-03262012 were rejected (R) due to unacceptable LCS recovery.

VII. Field Duplicate

Sample W48D-03262012 was collected as a field duplicate of sample W48-03262012. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate samples. Benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene were detected in W48D-03262012 but were not reported in the paired sample. Results were qualified as not detected (U)

at the analyte-specific RL or the reported concentration, whichever was greater in W48-03262012.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Ion chromatograms were not provided for any of the compounds reported in these samples. The data validation was completed on the assumption that all of the ratios for the paired ions were acceptable. The laboratory stated that they utilize an acceptance criteria of $\pm 20\%D$ for the ratio of the paired ions. For acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612, there is a "Q" qualifier on the quantitation report which indicates that the signal failed the ratio test, yet the analyte was reported by the laboratory. The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL on this basis.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). In most cases, the reporting limits were based on the project required reporting limits from the QAPP. All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- A 7%R in the LCS was reported for acridine; however, the laboratory reported the compound as not detected.
- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".
- No ratios or spectra were included in the data package to support the identification of the reported compounds.

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ) due to unacceptable MS/MSD recoveries.
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLP10T-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in W48D-

032612 were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

- Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (J, UJ) due to the high %RSD results.
- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene in W48-03262012 were qualified as estimated (L, UJ) and may be biased low due to the low recovery of chrysene-d₁₂.
- Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater, due to sample concentrations detected within five-times the concentration found in the field blank.
- Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L), and results for acridine in SLP10T-032612 and W48FB-03262012 were rejected (R) due to unacceptable LCS recovery.
- Results for benzo [a] anthracene, benzo [b] fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene in W48D-03262012 were qualified as not detected (U) at the analyte-specific RL or the reported concentration, whichever was greater, because they were detected in W48D-03262012 but were not detected in the paired sample.
- The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL because in each case the signal failed the ratio test.

XII. Documentation issues observed in the data package are described in Section

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ATTACHMENT A

**DATA SUMMARY FORMS
Laboratory Job No. 280-27039
PAHs in Water**

ddms Project No. 2006-0022

[illegible]

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS

Laboratory Job No. 280-27039

PAHs in Water

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: SLP10T-032612

Lab Sample ID: 280-27039-1

Date Sampled: 03/26/2012 1220

Client Matrix: Water

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3907.D
Dilution:	1.0			Initial Weight/Volume:	3782.1 mL
Analysis Date:	04/17/2012 1744			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	24		0.74	5.3
1-Methylnaphthalene	3.9	J	0.94	5.9
2-Methylnaphthalene	2.2	J	1.0	6.2
Acenaphthene	14		0.53	6.0
Acenaphthylene	0.01	+ U	0.81	5.1
Acridine	R ND	*	6.9	6.9
Anthracene	ND		0.85	4.4
Benzo[a]anthracene	ND	US	0.97	4.5
Benzo[a]pyrene	R ND		1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.5
Benzo[b]fluoranthene	R ND		1.5	5.0
Benzo(b)thiophene	2.1	J	0.79	5.5
Benzo[k]fluoranthene	R ND		1.3	4.3
Benzo[g,h,i]perylene	R ND		1.2	6.6
Carbazole	ND		0.76	4.0
Chrysene	ND	US	1.3	5.9
Dibenz(a,h)anthracene	R ND		1.1	6.2
Dibenzofuran	1.6	J	1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.9
Fluorene	2.2	J	0.90	4.3
Indene	ND		3.5	5.0
Indole	1.9	J	1.8	5.0
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.7
Naphthalene	9.5	U	1.2	9.1
Perylene	R ND		4.0	4.0
Phenanthrene	ND		3.4	6.7
Pyrene	ND	US	1.0	4.4
Quinoline	ND		6.0	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	37		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

Polly S. Newbold
3/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: W48-032612

Lab Sample ID: 280-27039-2

Date Sampled: 03/26/2012 1320

Client Matrix: Water

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3908.D
Dilution:	1.0			Initial Weight/Volume:	3567.2 mL
Analysis Date:	04/17/2012 1820			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.5	J U	0.76	6.1
2,3-Dihydroindene	4.6	J	0.78	5.6
1-Methylnaphthalene	2.2	J U	1.0	6.3
2-Methylnaphthalene	2.2	J U	1.1	6.6
Acenaphthene	89		0.56	6.4
Acenaphthylene	3.4	J	0.86	5.4
Acridine	9.9	J L	7.3	7.3
Anthracene	5.8		0.90	4.7
Benzo[a]anthracene	ND	US	1.0	4.8
Benzo[a]pyrene	R ND		1.4	2.8
Benzo[e]pyrene	R ND		1.3	4.8
Benzo[b]fluoranthene	R ND		1.6	5.3
Benzo(b)thiophene	8.2		0.84	5.8
Benzo[k]fluoranthene	R ND		1.4	4.6
Benzo[g,h,i]perylene	R ND		1.3	7.0
Carbazole	2.2	J	0.81	4.3
Chrysene	ND	US	1.4	6.3
Dibenz(a,h)anthracene	R ND		1.2	6.6
Dibenzofuran	ND		1.1	6.4
Dibenzothiophene	ND		1.1	4.6
Fluoranthene	ND		1.9	5.2
Fluorene	ND		0.95	4.6
Indene	26		3.7	5.3
Indole	ND		1.9	5.3
Indeno[1,2,3-cd]pyrene	R ND		1.4	6.1
Naphthalene	7.0	J U	1.3	9.6
Perylene	R ND		4.3	4.3
Phenanthrene	ND	U	3.6	7.1
Pyrene	3.9 3.9	U J	1.1	4.7
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.3

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	26	X	28 - 101
Naphthalene-d8 (Surr)	78		22 - 97

Dolly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: W48D-032612

Lab Sample ID: 280-27039-3FD

Date Sampled: 03/26/2012 1335

Client Matrix: Water

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3911.D
Dilution:	1.0			Initial Weight/Volume:	3870.1 mL
Analysis Date:	04/17/2012 2005			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.4	J U	0.70	5.6
2,3-Dihydroindene	4.2	J	0.72	5.2
1-Methylnaphthalene	1.9	J U	0.92	5.8
2-Methylnaphthalene	2.0	J U	1.0	6.1
Acenaphthene	88	J	0.52	5.9
Acenaphthylene	3.4	J	0.80	5.0
Acridine	11	J L	6.7	6.7
Anthracene	7.4	J	0.83	4.3
Benzo[a]anthracene	3.5	J U	0.95	4.4
Benzo[a]pyrene	R ND		1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.4
Benzo[b]fluoranthene	2.1	J U	1.4	4.9
Benzo(b)thiophene	7.9	J	0.78	5.4
Benzo[k]fluoranthene	2.0	J U	1.3	4.2
Benzo[g,h,i]perylene	R ND		1.2	6.4
Carbazole	4.0	J	0.74	3.9
Chrysene	2.8	J U	1.3	5.8
Dibenz(a,h)anthracene	R ND		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	3.2	J U	1.7	4.8
Fluorene	0.94	J U	0.88	4.2
Indene	25	J	3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.6
Naphthalene	7.5	J U	1.2	8.9
Perylene	R ND		3.9	3.9
Phenanthrene	3.6	J U	3.3	6.5
Pyrene	5.9	J	1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	39		28 - 101
Naphthalene-d8 (Surr)	71		22 - 97

Collyer S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: W48FB-032612

Lab Sample ID: 280-27039-4FB

Client Matrix: Water

Date Sampled: 03/26/2012 1340

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3912.D
Dilution:	1.0			Initial Weight/Volume:	3803.1 mL
Analysis Date:	04/17/2012 2040			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	0.80	J	0.74	5.3
1-Methylnaphthalene	ND		0.94	5.9
2-Methylnaphthalene	ND		1.0	6.2
Acenaphthene	ND		0.53	6.0
Acenaphthylene	ND		0.81	5.0
Acridine	R ND	*	6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND	UJ	0.97	4.5
Benzo[a]pyrene	R ND		1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.5
Benzo[b]fluoranthene	R ND		1.5	4.9
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	R ND		1.3	4.3
Benzo[g,h,i]perylene	R ND		1.2	6.5
Carbazole	ND		0.76	4.0
Chrysene	ND	UJ	1.3	5.9
Dibenz(a,h)anthracene	R ND		1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.7
Naphthalene	5.3	J UJ	1.2	9.0
Perylene	R ND		4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	ND	UJ	1.0	4.4
Quinoline	ND		5.9	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	77		23 - 84
Chrysene-d12 (Surr)	83		28 - 101
Naphthalene-d8 (Surr)	75		22 - 97

Polly S. Newbold
2/26/2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-30428-1

Client Project/Site: CSLP - Reilly Tar & Chemical

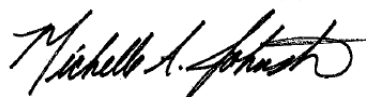
For:

Summit Envirosolutions Inc

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Attn: William M Gregg



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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-30428-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Eight samples were received under chain of custody on June 26, 2012. The samples were received at temperatures of 3.2°C, 1.2°C, 1.5°C, 1.6°C and 2.2° C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

SLP11-062512 (280-30428-1) had an initial volume of 3546.3 mL
SLP11D-062512 (280-30428-2) had an initial volume of 3485 mL
SLP11FB-062512 (280-30428-3) had an initial volume of 3619.9 mL
E2-062512 (280-30428-4) had an initial volume of 3467.6 mL
E3-062512 (280-30428-5) had an initial volume of 3865.7 mL
E15-062512 (280-30428-6) had an initial volume of 3696.3 mL
E13-062512 (280-30428-7) had an initial volume of 3702.2 mL
SLP12-062512 (280-30428-8) had an initial volume of 3485.3 mL

Surrogate Fluorene-d10 and/or Chrysene-d12 were recovered outside the QC control limits in the following samples, as detailed below. Matrix interference was not obvious. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

SLP11-062512 (280-30428-1) recovered Fluorene-d10 at 88% (limits 23-84%)
SLP11D-062512 (280-30428-2) recovered Fluorene-d10 at 89% (limits 23-84%)
SLP11FB-062512 (280-30428-3) recovered Fluorene-d10 at 91% (limits 23-84%)
E2-062512 (280-30428-4) recovered Fluorene-d10 at 88% (limits 23-84%)
E3-062512 (280-30428-5) recovered Chrysene-d12 at 25% (limits 28-101%)
E15-062512 (280-30428-6) recovered Chrysene-d12 at 10% (limits 28-101%)
E13-062512 (280-30428-7) recovered Fluorene-d10 at 92% (limits 23-84%)
SLP12-062512 (280-30428-8) recovered Fluorene-d10 at 90% (limits 23-84%)

Low levels of several analytes are present in the method blank associated with prep batch 280-126003. Because the concentrations in the method blank are not present at levels greater than one half the reporting limits, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

The LCS associated with prep batch 280-126003 exhibited the percent recovery below the QC control limits for Acridine at 8% (limits 30-150%). Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with “**”.

The MS/MSD associated with prep batch 280-126003 was performed using sample SLP11-062512 (280-30428-1), as requested. MS/MSD exhibited 10 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited 1 of the 33 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylchloranthrene	Acridine	Benzo[a]pyrene
Benzo[e]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene
Benzo[ghi]perylene	Dibenzo(a,h)anthracene	Indene
Indeno[1,2,3-cd]pyrene	Perylene	Fulorene-d10

The initial calibration verification (ICV) associated with analytical batch 280-129031 exhibited a recovery above the QC control limits for Benzo(a)anthracene at 59.9% D. This is an indicator that the data may be biased high. As no detectable concentrations of Benzo(a)anthracene are present in the associated samples, corrective action is deemed unnecessary.

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-30428-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	5
MS Surrogates	3	2
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	24	11
Samples and QC Internal Standard Area	36	36
TOTAL	193	174
% Completeness	90.2%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-30428-1					
Sample: SLP11-062512					
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	2.8	Acenaphthene	1.8	43.5	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	0.78	NC	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	1.3	NC	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	1.8	Benzo(b)thiophene	1.7	5.7	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	0.82	Carbazole	ND	NC	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	3.9	2,3-Dihydroindene	3.5	10.8	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	5.6	2-Methylnaphthalene	ND	NC	
1-Methylnaphthalene	5.4	1-Methylnaphthalene	ND	NC	
Naphthalene	11	Naphthalene	5.5	66.7	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	1.1	Pyrene	ND	NC	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP11-062512

Lab Sample ID: 280-30428-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	3.9	J	5.6	0.79	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	5.4	J B	6.3	1.0	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	5.6	J B	6.7	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	2.8	J B	6.4	0.56	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	1.8	J	5.9	0.85	ng/L	1		8270C	Total/NA
Carbazole	0.82	J B	4.3	0.81	ng/L	1		8270C	Total/NA
Naphthalene	11	B	9.7	1.3	ng/L	1		8270C	Total/NA
Pyrene	1.1	J B	4.7	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: SLP11D-062512

Lab Sample ID: 280-30428-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	0.78	J	6.2	0.78	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	3.5	J	5.7	0.80	ng/L	1		8270C	Total/NA
Acenaphthene	1.8	J B	6.5	0.57	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	1.7	J	6.0	0.86	ng/L	1		8270C	Total/NA
Benzo[g,h,i]perylene	1.3	J B	7.1	1.3	ng/L	1		8270C	Total/NA
Naphthalene	5.5	J B	9.9	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP11FB-062512

Lab Sample ID: 280-30428-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.9	J	5.5	0.77	ng/L	1		8270C	Total/NA
Naphthalene	6.0	J B	9.5	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: E2-062512

Lab Sample ID: 280-30428-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	2.4	J	5.8	0.81	ng/L	1		8270C	Total/NA
Acenaphthene	0.70	J B	6.6	0.58	ng/L	1		8270C	Total/NA
Anthracene	1.1	J B	4.8	0.92	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	2.5	J	6.0	0.87	ng/L	1		8270C	Total/NA
Naphthalene	3.5	J B	9.9	1.3	ng/L	1		8270C	Total/NA
Pyrene	2.5	J B	4.8	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: E3-062512

Lab Sample ID: 280-30428-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	14		5.2	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.1	J B	5.8	0.92	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.2	J B	6.1	1.0	ng/L	1		8270C	Total/NA
Naphthalene	13	B	8.9	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: E15-062512

Lab Sample ID: 280-30428-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.1	J	5.4	0.76	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.2	J B	6.4	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	1.1	J B	6.2	0.54	ng/L	1		8270C	Total/NA
Naphthalene	3.3	J B	9.3	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: E13-062512

Lab Sample ID: 280-30428-7

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E13-062512 (Continued)

Lab Sample ID: 280-30428-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	8.6		5.4	0.76	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.1	J B	6.1	0.96	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.8	J B	6.4	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	140	B	6.2	0.54	ng/L	1		8270C	Total/NA
Acenaphthylene	14		5.2	0.83	ng/L	1		8270C	Total/NA
Anthracene	1.2	J B	4.5	0.86	ng/L	1		8270C	Total/NA
Carbazole	1.1	J B	4.1	0.78	ng/L	1		8270C	Total/NA
Dibenzothiophene	3.4	J	4.4	1.1	ng/L	1		8270C	Total/NA
Fluoranthene	3.2	J B	5.0	1.8	ng/L	1		8270C	Total/NA
Fluorene	1.3	J	4.4	0.92	ng/L	1		8270C	Total/NA
Naphthalene	6.8	J B	9.3	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	5.0	J	6.8	3.5	ng/L	1		8270C	Total/NA
Pyrene	13	B	4.5	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: SLP12-062512

Lab Sample ID: 280-30428-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	4.5	J	5.7	0.80	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.5	J B	6.8	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	0.76	J B	6.5	0.57	ng/L	1		8270C	Total/NA
Naphthalene	8.6	J B	9.9	1.3	ng/L	1		8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-30428-1	SLP11-062512	Water	06/25/12 10:35	06/26/12 09:30
280-30428-2	SLP11D-062512	Water	06/25/12 10:35	06/26/12 09:30
280-30428-3	SLP11FB-062512	Water	06/25/12 10:35	06/26/12 09:30
280-30428-4	E2-062512	Water	06/25/12 12:25	06/26/12 09:30
280-30428-5	E3-062512	Water	06/25/12 12:40	06/26/12 09:30
280-30428-6	E15-062512	Water	06/25/12 13:00	06/26/12 09:30
280-30428-7	E13-062512	Water	06/25/12 13:15	06/26/12 09:30
280-30428-8	SLP12-062512	Water	06/25/12 13:40	06/26/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP11-062512

Lab Sample ID: 280-30428-1

Date Collected: 06/25/12 10:35

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.1	0.77	ng/L		06/28/12 18:05	07/20/12 17:40	1
2,3-Dihydroindene	3.9	J	5.6	0.79	ng/L		06/28/12 18:05	07/20/12 17:40	1
1-Methylnaphthalene	5.4	J B	6.3	1.0	ng/L		06/28/12 18:05	07/20/12 17:40	1
2-Methylnaphthalene	5.6	J B	6.7	1.1	ng/L		06/28/12 18:05	07/20/12 17:40	1
Acenaphthene	2.8	J B	6.4	0.56	ng/L		06/28/12 18:05	07/20/12 17:40	1
Acenaphthylene	ND		5.4	0.87	ng/L		06/28/12 18:05	07/20/12 17:40	1
Acridine	ND	*	7.3	7.3	ng/L		06/28/12 18:05	07/20/12 17:40	1
Anthracene	ND		4.7	0.90	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[a]anthracene	ND		4.9	1.0	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[b]fluoranthene	ND		5.3	1.6	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo(b)thiophene	1.8	J	5.9	0.85	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[k]fluoranthene	ND		4.6	1.4	ng/L		06/28/12 18:05	07/20/12 17:40	1
Benzo[g,h,i]perylene	ND		7.0	1.3	ng/L		06/28/12 18:05	07/20/12 17:40	1
Carbazole	0.82	J B	4.3	0.81	ng/L		06/28/12 18:05	07/20/12 17:40	1
Chrysene	ND		6.3	1.4	ng/L		06/28/12 18:05	07/20/12 17:40	1
Dibenz(a,h)anthracene	ND		6.7	1.2	ng/L		06/28/12 18:05	07/20/12 17:40	1
Dibenzofuran	ND		6.4	1.1	ng/L		06/28/12 18:05	07/20/12 17:40	1
Dibenzothiophene	ND		4.6	1.1	ng/L		06/28/12 18:05	07/20/12 17:40	1
Fluoranthene	ND		5.2	1.9	ng/L		06/28/12 18:05	07/20/12 17:40	1
Fluorene	ND		4.6	0.96	ng/L		06/28/12 18:05	07/20/12 17:40	1
Indene	ND		5.3	3.7	ng/L		06/28/12 18:05	07/20/12 17:40	1
Indole	ND		5.3	2.0	ng/L		06/28/12 18:05	07/20/12 17:40	1
Indeno[1,2,3-cd]pyrene	ND		6.1	1.4	ng/L		06/28/12 18:05	07/20/12 17:40	1
Naphthalene	11	B	9.7	1.3	ng/L		06/28/12 18:05	07/20/12 17:40	1
Perylene	ND		4.3	4.3	ng/L		06/28/12 18:05	07/20/12 17:40	1
Phenanthrene	ND		7.1	3.6	ng/L		06/28/12 18:05	07/20/12 17:40	1
Pyrene	1.1	J B	4.7	1.1	ng/L		06/28/12 18:05	07/20/12 17:40	1
Quinoline	ND		10	6.4	ng/L		06/28/12 18:05	07/20/12 17:40	1
Biphenyl	ND		6.3	1.2	ng/L		06/28/12 18:05	07/20/12 17:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	88	X	23 - 84	06/28/12 18:05	07/20/12 17:40	1
Chrysene-d12 (Surr)	40		28 - 101	06/28/12 18:05	07/20/12 17:40	1
Naphthalene-d8 (Surr)	91		22 - 97	06/28/12 18:05	07/20/12 17:40	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP11D-062512

Lab Sample ID: 280-30428-2

Date Collected: 06/25/12 10:35

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.78	J	6.2	0.78	ng/L		06/28/12 18:05	07/20/12 19:28	1
2,3-Dihydroindene	3.5	J	5.7	0.80	ng/L		06/28/12 18:05	07/20/12 19:28	1
1-Methylnaphthalene	ND		6.4	1.0	ng/L		06/28/12 18:05	07/20/12 19:28	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		06/28/12 18:05	07/20/12 19:28	1
Acenaphthene	1.8	J B	6.5	0.57	ng/L		06/28/12 18:05	07/20/12 19:28	1
Acenaphthylene	ND		5.5	0.88	ng/L		06/28/12 18:05	07/20/12 19:28	1
Acridine	ND	*	7.5	7.5	ng/L		06/28/12 18:05	07/20/12 19:28	1
Anthracene	ND		4.8	0.92	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo(b)thiophene	1.7	J	6.0	0.86	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 19:28	1
Benzo[g,h,i]perylene	1.3	J B	7.1	1.3	ng/L		06/28/12 18:05	07/20/12 19:28	1
Carbazole	ND		4.4	0.83	ng/L		06/28/12 18:05	07/20/12 19:28	1
Chrysene	ND		6.4	1.4	ng/L		06/28/12 18:05	07/20/12 19:28	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		06/28/12 18:05	07/20/12 19:28	1
Dibenzofuran	ND		6.5	1.1	ng/L		06/28/12 18:05	07/20/12 19:28	1
Dibenzothiophene	ND		4.7	1.1	ng/L		06/28/12 18:05	07/20/12 19:28	1
Fluoranthene	ND		5.3	1.9	ng/L		06/28/12 18:05	07/20/12 19:28	1
Fluorene	ND		4.7	0.98	ng/L		06/28/12 18:05	07/20/12 19:28	1
Indene	ND		5.4	3.8	ng/L		06/28/12 18:05	07/20/12 19:28	1
Indole	ND		5.4	2.0	ng/L		06/28/12 18:05	07/20/12 19:28	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		06/28/12 18:05	07/20/12 19:28	1
Naphthalene	5.5	J B	9.9	1.3	ng/L		06/28/12 18:05	07/20/12 19:28	1
Perylene	ND		4.4	4.4	ng/L		06/28/12 18:05	07/20/12 19:28	1
Phenanthrene	ND		7.2	3.7	ng/L		06/28/12 18:05	07/20/12 19:28	1
Pyrene	ND		4.8	1.1	ng/L		06/28/12 18:05	07/20/12 19:28	1
Quinoline	ND		10	6.5	ng/L		06/28/12 18:05	07/20/12 19:28	1
Biphenyl	ND		6.4	1.2	ng/L		06/28/12 18:05	07/20/12 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	89	X	23 - 84	06/28/12 18:05	07/20/12 19:28	1
Chrysene-d12 (Surr)	58		28 - 101	06/28/12 18:05	07/20/12 19:28	1
Naphthalene-d8 (Surr)	90		22 - 97	06/28/12 18:05	07/20/12 19:28	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP11FB-062512

Lab Sample ID: 280-30428-3

Date Collected: 06/25/12 10:35

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.0	0.75	ng/L		06/28/12 18:05	07/20/12 20:04	1
2,3-Dihydroindene	1.9	J	5.5	0.77	ng/L		06/28/12 18:05	07/20/12 20:04	1
1-Methylnaphthalene	ND		6.2	0.98	ng/L		06/28/12 18:05	07/20/12 20:04	1
2-Methylnaphthalene	ND		6.5	1.1	ng/L		06/28/12 18:05	07/20/12 20:04	1
Acenaphthene	ND		6.3	0.55	ng/L		06/28/12 18:05	07/20/12 20:04	1
Acenaphthylene	ND		5.3	0.85	ng/L		06/28/12 18:05	07/20/12 20:04	1
Acridine	ND	*	7.2	7.2	ng/L		06/28/12 18:05	07/20/12 20:04	1
Anthracene	ND		4.6	0.88	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo(b)thiophene	ND		5.7	0.83	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		06/28/12 18:05	07/20/12 20:04	1
Benzo[g,h,i]perylene	ND		6.9	1.3	ng/L		06/28/12 18:05	07/20/12 20:04	1
Carbazole	ND		4.2	0.80	ng/L		06/28/12 18:05	07/20/12 20:04	1
Chrysene	ND		6.2	1.4	ng/L		06/28/12 18:05	07/20/12 20:04	1
Dibenz(a,h)anthracene	ND		6.5	1.1	ng/L		06/28/12 18:05	07/20/12 20:04	1
Dibenzofuran	ND		6.3	1.1	ng/L		06/28/12 18:05	07/20/12 20:04	1
Dibenzothiophene	ND		4.5	1.1	ng/L		06/28/12 18:05	07/20/12 20:04	1
Fluoranthene	ND		5.1	1.9	ng/L		06/28/12 18:05	07/20/12 20:04	1
Fluorene	ND		4.5	0.94	ng/L		06/28/12 18:05	07/20/12 20:04	1
Indene	ND		5.2	3.6	ng/L		06/28/12 18:05	07/20/12 20:04	1
Indole	ND		5.2	1.9	ng/L		06/28/12 18:05	07/20/12 20:04	1
Indeno[1,2,3-cd]pyrene	ND		6.0	1.4	ng/L		06/28/12 18:05	07/20/12 20:04	1
Naphthalene	6.0	J B	9.5	1.3	ng/L		06/28/12 18:05	07/20/12 20:04	1
Perylene	ND		4.2	4.2	ng/L		06/28/12 18:05	07/20/12 20:04	1
Phenanthrene	ND		7.0	3.5	ng/L		06/28/12 18:05	07/20/12 20:04	1
Pyrene	ND		4.6	1.1	ng/L		06/28/12 18:05	07/20/12 20:04	1
Quinoline	ND		9.9	6.2	ng/L		06/28/12 18:05	07/20/12 20:04	1
Biphenyl	ND		6.2	1.2	ng/L		06/28/12 18:05	07/20/12 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	91	X	23 - 84	06/28/12 18:05	07/20/12 20:04	1
Chrysene-d12 (Surr)	92		28 - 101	06/28/12 18:05	07/20/12 20:04	1
Naphthalene-d8 (Surr)	88		22 - 97	06/28/12 18:05	07/20/12 20:04	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E2-062512

Lab Sample ID: 280-30428-4

Date Collected: 06/25/12 12:25

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.2	0.78	ng/L		06/28/12 18:05	07/20/12 20:40	1
2,3-Dihydroindene	2.4	J	5.8	0.81	ng/L		06/28/12 18:05	07/20/12 20:40	1
1-Methylnaphthalene	ND		6.5	1.0	ng/L		06/28/12 18:05	07/20/12 20:40	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		06/28/12 18:05	07/20/12 20:40	1
Acenaphthene	0.70	J B	6.6	0.58	ng/L		06/28/12 18:05	07/20/12 20:40	1
Acenaphthylene	ND		5.5	0.89	ng/L		06/28/12 18:05	07/20/12 20:40	1
Acridine	ND	*	7.5	7.5	ng/L		06/28/12 18:05	07/20/12 20:40	1
Anthracene	1.1	J B	4.8	0.92	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[a]anthracene	ND		5.0	1.1	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[e]pyrene	ND		5.0	1.3	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo(b)thiophene	2.5	J	6.0	0.87	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 20:40	1
Benzo[g,h,i]perylene	ND		7.2	1.3	ng/L		06/28/12 18:05	07/20/12 20:40	1
Carbazole	ND		4.4	0.83	ng/L		06/28/12 18:05	07/20/12 20:40	1
Chrysene	ND		6.5	1.4	ng/L		06/28/12 18:05	07/20/12 20:40	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		06/28/12 18:05	07/20/12 20:40	1
Dibenzofuran	ND		6.6	1.1	ng/L		06/28/12 18:05	07/20/12 20:40	1
Dibenzothiophene	ND		4.7	1.1	ng/L		06/28/12 18:05	07/20/12 20:40	1
Fluoranthene	ND		5.3	1.9	ng/L		06/28/12 18:05	07/20/12 20:40	1
Fluorene	ND		4.7	0.98	ng/L		06/28/12 18:05	07/20/12 20:40	1
Indene	ND		5.4	3.8	ng/L		06/28/12 18:05	07/20/12 20:40	1
Indole	ND		5.4	2.0	ng/L		06/28/12 18:05	07/20/12 20:40	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.5	ng/L		06/28/12 18:05	07/20/12 20:40	1
Naphthalene	3.5	J B	9.9	1.3	ng/L		06/28/12 18:05	07/20/12 20:40	1
Perylene	ND		4.4	4.4	ng/L		06/28/12 18:05	07/20/12 20:40	1
Phenanthrene	ND		7.3	3.7	ng/L		06/28/12 18:05	07/20/12 20:40	1
Pyrene	2.5	J B	4.8	1.1	ng/L		06/28/12 18:05	07/20/12 20:40	1
Quinoline	ND		10	6.5	ng/L		06/28/12 18:05	07/20/12 20:40	1
Biphenyl	ND		6.5	1.2	ng/L		06/28/12 18:05	07/20/12 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	88	X	23 - 84	06/28/12 18:05	07/20/12 20:40	1
Chrysene-d12 (Surr)	53		28 - 101	06/28/12 18:05	07/20/12 20:40	1
Naphthalene-d8 (Surr)	82		22 - 97	06/28/12 18:05	07/20/12 20:40	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E3-062512

Lab Sample ID: 280-30428-5

Date Collected: 06/25/12 12:40

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.70	ng/L		06/28/12 18:05	07/20/12 21:16	1
2,3-Dihydroindene	14		5.2	0.72	ng/L		06/28/12 18:05	07/20/12 21:16	1
1-Methylnaphthalene	1.1	J B	5.8	0.92	ng/L		06/28/12 18:05	07/20/12 21:16	1
2-Methylnaphthalene	2.2	J B	6.1	1.0	ng/L		06/28/12 18:05	07/20/12 21:16	1
Acenaphthene	ND		5.9	0.52	ng/L		06/28/12 18:05	07/20/12 21:16	1
Acenaphthylene	ND		5.0	0.80	ng/L		06/28/12 18:05	07/20/12 21:16	1
Acridine	ND	*	6.7	6.7	ng/L		06/28/12 18:05	07/20/12 21:16	1
Anthracene	ND		4.3	0.83	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[a]anthracene	ND		4.4	0.95	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		06/28/12 18:05	07/20/12 21:16	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		06/28/12 18:05	07/20/12 21:16	1
Carbazole	ND		3.9	0.75	ng/L		06/28/12 18:05	07/20/12 21:16	1
Chrysene	ND		5.8	1.3	ng/L		06/28/12 18:05	07/20/12 21:16	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		06/28/12 18:05	07/20/12 21:16	1
Dibenzofuran	ND		5.9	1.0	ng/L		06/28/12 18:05	07/20/12 21:16	1
Dibenzothiophene	ND		4.2	1.0	ng/L		06/28/12 18:05	07/20/12 21:16	1
Fluoranthene	ND		4.8	1.7	ng/L		06/28/12 18:05	07/20/12 21:16	1
Fluorene	ND		4.2	0.88	ng/L		06/28/12 18:05	07/20/12 21:16	1
Indene	ND		4.9	3.4	ng/L		06/28/12 18:05	07/20/12 21:16	1
Indole	ND		4.9	1.8	ng/L		06/28/12 18:05	07/20/12 21:16	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		06/28/12 18:05	07/20/12 21:16	1
Naphthalene	13	B	8.9	1.2	ng/L		06/28/12 18:05	07/20/12 21:16	1
Perylene	ND		3.9	3.9	ng/L		06/28/12 18:05	07/20/12 21:16	1
Phenanthrene	ND		6.5	3.3	ng/L		06/28/12 18:05	07/20/12 21:16	1
Pyrene	ND		4.3	1.0	ng/L		06/28/12 18:05	07/20/12 21:16	1
Quinoline	ND		9.3	5.8	ng/L		06/28/12 18:05	07/20/12 21:16	1
Biphenyl	ND		5.8	1.1	ng/L		06/28/12 18:05	07/20/12 21:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	06/28/12 18:05	07/20/12 21:16	1
Chrysene-d12 (Surr)	25	X	28 - 101	06/28/12 18:05	07/20/12 21:16	1
Naphthalene-d8 (Surr)	79		22 - 97	06/28/12 18:05	07/20/12 21:16	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E15-062512

Lab Sample ID: 280-30428-6

Date Collected: 06/25/12 13:00

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.8	0.74	ng/L		06/28/12 18:05	07/20/12 21:51	1
2,3-Dihydroindene	1.1	J	5.4	0.76	ng/L		06/28/12 18:05	07/20/12 21:51	1
1-Methylnaphthalene	ND		6.1	0.96	ng/L		06/28/12 18:05	07/20/12 21:51	1
2-Methylnaphthalene	1.2	J B	6.4	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Acenaphthene	1.1	J B	6.2	0.54	ng/L		06/28/12 18:05	07/20/12 21:51	1
Acenaphthylene	ND		5.2	0.83	ng/L		06/28/12 18:05	07/20/12 21:51	1
Acridine	ND	*	7.0	7.0	ng/L		06/28/12 18:05	07/20/12 21:51	1
Anthracene	ND		4.5	0.87	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[a]anthracene	ND		4.7	1.0	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[e]pyrene	ND		4.7	1.2	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo(b)thiophene	ND		5.6	0.81	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		06/28/12 18:05	07/20/12 21:51	1
Benzo[g,h,i]perylene	ND		6.7	1.3	ng/L		06/28/12 18:05	07/20/12 21:51	1
Carbazole	ND		4.1	0.78	ng/L		06/28/12 18:05	07/20/12 21:51	1
Chrysene	ND		6.1	1.3	ng/L		06/28/12 18:05	07/20/12 21:51	1
Dibenz(a,h)anthracene	ND		6.4	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Dibenzofuran	ND		6.2	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Dibenzothiophene	ND		4.4	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Fluoranthene	ND		5.0	1.8	ng/L		06/28/12 18:05	07/20/12 21:51	1
Fluorene	ND		4.4	0.92	ng/L		06/28/12 18:05	07/20/12 21:51	1
Indene	ND		5.1	3.5	ng/L		06/28/12 18:05	07/20/12 21:51	1
Indole	ND		5.1	1.9	ng/L		06/28/12 18:05	07/20/12 21:51	1
Indeno[1,2,3-cd]pyrene	ND		5.8	1.4	ng/L		06/28/12 18:05	07/20/12 21:51	1
Naphthalene	3.3	J B	9.3	1.2	ng/L		06/28/12 18:05	07/20/12 21:51	1
Perylene	ND		4.1	4.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Phenanthrene	ND		6.8	3.5	ng/L		06/28/12 18:05	07/20/12 21:51	1
Pyrene	ND		4.5	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Quinoline	ND		9.7	6.1	ng/L		06/28/12 18:05	07/20/12 21:51	1
Biphenyl	ND		6.1	1.1	ng/L		06/28/12 18:05	07/20/12 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	71		23 - 84	06/28/12 18:05	07/20/12 21:51	1
Chrysene-d12 (Surr)	10	X	28 - 101	06/28/12 18:05	07/20/12 21:51	1
Naphthalene-d8 (Surr)	68		22 - 97	06/28/12 18:05	07/20/12 21:51	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E13-062512

Lab Sample ID: 280-30428-7

Date Collected: 06/25/12 13:15

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.8	0.73	ng/L		06/28/12 18:05	07/20/12 22:27	1
2,3-Dihydroindene	8.6		5.4	0.76	ng/L		06/28/12 18:05	07/20/12 22:27	1
1-Methylnaphthalene	1.1	J B	6.1	0.96	ng/L		06/28/12 18:05	07/20/12 22:27	1
2-Methylnaphthalene	1.8	J B	6.4	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Acenaphthene	140	B	6.2	0.54	ng/L		06/28/12 18:05	07/20/12 22:27	1
Acenaphthylene	14		5.2	0.83	ng/L		06/28/12 18:05	07/20/12 22:27	1
Acridine	ND	*	7.0	7.0	ng/L		06/28/12 18:05	07/20/12 22:27	1
Anthracene	1.2	J B	4.5	0.86	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo(b)thiophene	ND		5.6	0.81	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		06/28/12 18:05	07/20/12 22:27	1
Benzo[g,h,i]perylene	ND		6.7	1.3	ng/L		06/28/12 18:05	07/20/12 22:27	1
Carbazole	1.1	J B	4.1	0.78	ng/L		06/28/12 18:05	07/20/12 22:27	1
Chrysene	ND		6.1	1.3	ng/L		06/28/12 18:05	07/20/12 22:27	1
Dibenz(a,h)anthracene	ND		6.4	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Dibenzofuran	ND		6.2	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Dibenzothiophene	3.4	J	4.4	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Fluoranthene	3.2	J B	5.0	1.8	ng/L		06/28/12 18:05	07/20/12 22:27	1
Fluorene	1.3	J	4.4	0.92	ng/L		06/28/12 18:05	07/20/12 22:27	1
Indene	ND		5.1	3.5	ng/L		06/28/12 18:05	07/20/12 22:27	1
Indole	ND		5.1	1.9	ng/L		06/28/12 18:05	07/20/12 22:27	1
Indeno[1,2,3-cd]pyrene	ND		5.8	1.4	ng/L		06/28/12 18:05	07/20/12 22:27	1
Naphthalene	6.8	J B	9.3	1.2	ng/L		06/28/12 18:05	07/20/12 22:27	1
Perylene	ND		4.1	4.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Phenanthrene	5.0	J	6.8	3.5	ng/L		06/28/12 18:05	07/20/12 22:27	1
Pyrene	13	B	4.5	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Quinoline	ND		9.7	6.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Biphenyl	ND		6.1	1.1	ng/L		06/28/12 18:05	07/20/12 22:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	92	X	23 - 84				06/28/12 18:05	07/20/12 22:27	1
Chrysene-d12 (Surr)	47		28 - 101				06/28/12 18:05	07/20/12 22:27	1
Naphthalene-d8 (Surr)	85		22 - 97				06/28/12 18:05	07/20/12 22:27	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP12-062512

Lab Sample ID: 280-30428-8

Date Collected: 06/25/12 13:40

Matrix: Water

Date Received: 06/26/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.2	0.78	ng/L		06/28/12 18:05	07/20/12 23:02	1
2,3-Dihydroindene	4.5	J	5.7	0.80	ng/L		06/28/12 18:05	07/20/12 23:02	1
1-Methylnaphthalene	ND		6.4	1.0	ng/L		06/28/12 18:05	07/20/12 23:02	1
2-Methylnaphthalene	1.5	J B	6.8	1.1	ng/L		06/28/12 18:05	07/20/12 23:02	1
Acenaphthene	0.76	J B	6.5	0.57	ng/L		06/28/12 18:05	07/20/12 23:02	1
Acenaphthylene	ND		5.5	0.88	ng/L		06/28/12 18:05	07/20/12 23:02	1
Acridine	ND	*	7.5	7.5	ng/L		06/28/12 18:05	07/20/12 23:02	1
Anthracene	ND		4.8	0.92	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo(b)thiophene	ND		6.0	0.86	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 23:02	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		06/28/12 18:05	07/20/12 23:02	1
Carbazole	ND		4.4	0.83	ng/L		06/28/12 18:05	07/20/12 23:02	1
Chrysene	ND		6.4	1.4	ng/L		06/28/12 18:05	07/20/12 23:02	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		06/28/12 18:05	07/20/12 23:02	1
Dibenzofuran	ND		6.5	1.1	ng/L		06/28/12 18:05	07/20/12 23:02	1
Dibenzothiophene	ND		4.7	1.1	ng/L		06/28/12 18:05	07/20/12 23:02	1
Fluoranthene	ND		5.3	1.9	ng/L		06/28/12 18:05	07/20/12 23:02	1
Fluorene	ND		4.7	0.98	ng/L		06/28/12 18:05	07/20/12 23:02	1
Indene	ND		5.4	3.8	ng/L		06/28/12 18:05	07/20/12 23:02	1
Indole	ND		5.4	2.0	ng/L		06/28/12 18:05	07/20/12 23:02	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		06/28/12 18:05	07/20/12 23:02	1
Naphthalene	8.6	J B	9.9	1.3	ng/L		06/28/12 18:05	07/20/12 23:02	1
Perylene	ND		4.4	4.4	ng/L		06/28/12 18:05	07/20/12 23:02	1
Phenanthrene	ND		7.2	3.7	ng/L		06/28/12 18:05	07/20/12 23:02	1
Pyrene	ND		4.8	1.1	ng/L		06/28/12 18:05	07/20/12 23:02	1
Quinoline	ND		10	6.5	ng/L		06/28/12 18:05	07/20/12 23:02	1
Biphenyl	ND		6.4	1.2	ng/L		06/28/12 18:05	07/20/12 23:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	90	X	23 - 84	06/28/12 18:05	07/20/12 23:02	1
Chrysene-d12 (Surr)	58		28 - 101	06/28/12 18:05	07/20/12 23:02	1
Naphthalene-d8 (Surr)	84		22 - 97	06/28/12 18:05	07/20/12 23:02	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-30428-1	SLP11-062512	88 X	40	91
280-30428-1 MS	SLP11-062512	88 X	54	87
280-30428-1 MSD	SLP11-062512	87 X	46	85
280-30428-2	SLP11D-062512	89 X	58	90
280-30428-3	SLP11FB-062512	91 X	92	88
280-30428-4	E2-062512	88 X	53	82
280-30428-5	E3-062512	81	25 X	79
280-30428-6	E15-062512	71	10 X	68
280-30428-7	E13-062512	92 X	47	85
280-30428-8	SLP12-062512	90 X	58	84
LCS 280-126003/2-A	Lab Control Sample	81	98	85
MB 280-126003/1-A	Method Blank	75	83	83

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-126003/1-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		06/28/12 18:05	07/20/12 16:27	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		06/28/12 18:05	07/20/12 16:27	1
1-Methylnaphthalene	1.60	J	5.6	0.89	ng/L		06/28/12 18:05	07/20/12 16:27	1
2-Methylnaphthalene	1.94	J	5.9	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthene	0.855	J	5.7	0.50	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthylene	ND		4.8	0.77	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acridine	ND		6.5	6.5	ng/L		06/28/12 18:05	07/20/12 16:27	1
Anthracene	2.00	J	4.2	0.80	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]anthracene	16.9		4.3	0.92	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]pyrene	12.3		2.5	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[b]fluoranthene	15.1		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[k]fluoranthene	18.8		4.1	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[g,h,i]perylene	9.38		6.2	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Carbazole	0.795	J	3.8	0.72	ng/L		06/28/12 18:05	07/20/12 16:27	1
Chrysene	14.2		5.6	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenz(a,h)anthracene	11.8		5.9	1.0	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzofuran	0.994	J	5.7	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzothiophene	ND		4.1	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluoranthene	2.27	J	4.6	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluorene	ND		4.1	0.85	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indene	ND		4.7	3.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indole	ND		4.7	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indeno[1,2,3-cd]pyrene	16.1		5.4	1.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Naphthalene	1.35	J	8.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Perylene	ND		3.8	3.8	ng/L		06/28/12 18:05	07/20/12 16:27	1
Phenanthrene	ND		6.3	3.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Pyrene	2.03	J	4.2	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Quinoline	ND		9.0	5.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Biphenyl	ND		5.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	06/28/12 18:05	07/20/12 16:27	1
Chrysene-d12 (Surr)	83		28 - 101	06/28/12 18:05	07/20/12 16:27	1
Naphthalene-d8 (Surr)	83		22 - 97	06/28/12 18:05	07/20/12 16:27	1

Lab Sample ID: LCS 280-126003/2-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	63.2		ng/L		84	30 - 150
2,3-Dihydroindene	75.0	57.5		ng/L		77	30 - 150
1-Methylnaphthalene	75.0	63.4		ng/L		85	30 - 150
2-Methylnaphthalene	75.0	63.4		ng/L		85	25 - 95
3-Methylcholanthrene	75.0	28.4		ng/L		38	30 - 150
Acenaphthene	75.0	65.0		ng/L		87	30 - 150
Acenaphthylene	75.0	63.4		ng/L		85	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126003/2-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	ND	*	ng/L		8	30 - 150
Anthracene	75.0	63.3		ng/L		84	30 - 150
Benzo[a]anthracene	75.0	75.3		ng/L		100	30 - 150
Benzo[a]pyrene	75.0	64.9		ng/L		87	30 - 150
Benzo[e]pyrene	75.0	68.1		ng/L		91	37 - 105
Benzo[b]fluoranthene	75.0	73.4		ng/L		98	30 - 150
Benzo(b)thiophene	75.0	64.3		ng/L		86	30 - 150
Benzo[k]fluoranthene	75.0	72.6		ng/L		97	30 - 150
Benzo[g,h,i]perylene	75.0	64.3		ng/L		86	30 - 150
Carbazole	75.0	64.7		ng/L		86	30 - 150
Chrysene	75.0	74.6		ng/L		99	20 - 136
Dibenz(a,h)anthracene	75.0	66.3		ng/L		88	30 - 150
Dibenzofuran	75.0	65.0		ng/L		87	30 - 150
Dibenzothiophene	75.0	65.4		ng/L		87	30 - 150
Fluoranthene	75.0	63.8		ng/L		85	30 - 150
Fluorene	75.0	66.1		ng/L		88	34 - 96
Indene	75.0	60.4		ng/L		80	22 - 86
Indole	75.0	55.5		ng/L		74	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	63.5		ng/L		85	30 - 150
Naphthalene	75.0	63.9		ng/L		85	27 - 95
Perylene	75.0	64.7		ng/L		86	30 - 150
Phenanthrene	75.0	64.0		ng/L		85	30 - 150
Pyrene	75.0	58.1		ng/L		77	30 - 150
Quinoline	75.0	53.4		ng/L		71	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	41.4		ng/L		55	30 - 150
Biphenyl	75.0	63.7		ng/L		85	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	98		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Lab Sample ID: 280-30428-1 MS

Matrix: Water

Analysis Batch: 129031

Client Sample ID: SLP11-062512

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		80.3	69.7		ng/L		87	30 - 150
2,3-Dihydroindene	3.9	J	80.3	66.9		ng/L		78	30 - 150
1-Methylnaphthalene	5.4	J B	80.3	72.3		ng/L		83	30 - 150
2-Methylnaphthalene	5.6	J B	80.3	72.5		ng/L		83	25 - 95
3-Methylcholanthrene	ND		80.3	11.2	F	ng/L		14	30 - 150
Acenaphthene	2.8	J B	80.3	75.7		ng/L		91	30 - 150
Acenaphthylene	ND		80.3	80.0		ng/L		100	30 - 150
Acridine	ND	*	80.3	74.8		ng/L		93	30 - 150
Anthracene	ND		80.3	87.5		ng/L		109	30 - 150
Benzo[a]anthracene	ND		80.3	51.6		ng/L		64	30 - 150
Benzo[a]pyrene	ND		80.3	12.2	F	ng/L		15	30 - 150
Benzo[e]pyrene	ND		80.3	11.4	F	ng/L		14	37 - 105

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30428-1 MS

Matrix: Water

Analysis Batch: 129031

Client Sample ID: SLP11-062512

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	ND		80.3	14.0	F	ng/L		17	30 - 150
Benzo(b)thiophene	1.8	J	80.3	72.7		ng/L		88	30 - 150
Benzo[k]fluoranthene	ND		80.3	12.1	F	ng/L		15	30 - 150
Benzo[g,h,i]perylene	ND		80.3	4.11	J F	ng/L		5	30 - 150
Carbazole	0.82	J B	80.3	89.3		ng/L		110	30 - 150
Chrysene	ND		80.3	42.3		ng/L		53	20 - 136
Dibenz(a,h)anthracene	ND		80.3	3.24	J F	ng/L		4	30 - 150
Dibenzofuran	ND		80.3	73.6		ng/L		92	30 - 150
Dibenzothiophene	ND		80.3	74.8		ng/L		93	30 - 150
Fluoranthene	ND		80.3	76.0		ng/L		95	30 - 150
Fluorene	ND		80.3	75.5		ng/L		94	34 - 96
Indene	ND		80.3	70.6	F	ng/L		88	22 - 86
Indole	ND		80.3	72.8		ng/L		91	30 - 150
Indeno[1,2,3-cd]pyrene	ND		80.3	3.76	J F	ng/L		5	30 - 150
Naphthalene	11	B	80.3	76.5		ng/L		81	27 - 95
Perylene	ND		80.3	11.5	F	ng/L		14	30 - 150
Phenanthrene	ND		80.3	71.5		ng/L		89	30 - 150
Pyrene	1.1	J B	80.3	69.3		ng/L		86	30 - 150
Quinoline	ND		80.3	76.0		ng/L		95	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		80.3	81.3		ng/L		101	30 - 150
Biphenyl	ND		80.3	70.9		ng/L		88	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	54		28 - 101
Naphthalene-d8 (Surr)	87		22 - 97

Lab Sample ID: 280-30428-1 MSD

Matrix: Water

Analysis Batch: 129031

Client Sample ID: SLP11-062512

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	ND		79.9	65.9		ng/L		82	30 - 150	6	50
2,3-Dihydroindene	3.9	J	79.9	66.1		ng/L		78	30 - 150	1	50
1-Methylnaphthalene	5.4	J B	79.9	68.8		ng/L		79	30 - 150	5	50
2-Methylnaphthalene	5.6	J B	79.9	69.5		ng/L		80	25 - 95	4	50
3-Methylcholanthrene	ND		79.9	9.38	F	ng/L		12	30 - 150	17	50
Acenaphthene	2.8	J B	79.9	71.4		ng/L		86	30 - 150	6	50
Acenaphthylene	ND		79.9	82.6		ng/L		103	30 - 150	3	50
Acridine	ND	*	79.9	39.9	F	ng/L		50	30 - 150	61	50
Anthracene	ND		79.9	83.3		ng/L		104	30 - 150	5	50
Benzo[a]anthracene	ND		79.9	44.7		ng/L		56	30 - 150	14	50
Benzo[a]pyrene	ND		79.9	10.0	F	ng/L		13	30 - 150	20	50
Benzo[e]pyrene	ND		79.9	9.66	F	ng/L		12	37 - 105	17	50
Benzo[b]fluoranthene	ND		79.9	12.1	F	ng/L		15	30 - 150	15	50
Benzo(b)thiophene	1.8	J	79.9	69.2		ng/L		84	30 - 150	5	50
Benzo[k]fluoranthene	ND		79.9	10.2	F	ng/L		13	30 - 150	17	50
Benzo[g,h,i]perylene	ND		79.9	3.37	J F	ng/L		4	30 - 150	20	50
Carbazole	0.82	J B	79.9	85.3		ng/L		106	30 - 150	5	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30428-1 MSD

Matrix: Water

Analysis Batch: 129031

Client Sample ID: SLP11-062512

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		79.9	35.8		ng/L		45	20 - 136	17	50
Dibenz(a,h)anthracene	ND		79.9	2.65	J F	ng/L		3	30 - 150	20	50
Dibenzofuran	ND		79.9	70.0		ng/L		88	30 - 150	5	50
Dibenzothiophene	ND		79.9	71.2		ng/L		89	30 - 150	5	50
Fluoranthene	ND		79.9	70.0		ng/L		88	30 - 150	8	50
Fluorene	ND		79.9	72.7		ng/L		91	34 - 96	4	50
Indene	ND		79.9	68.8		ng/L		86	22 - 86	3	50
Indole	ND		79.9	72.6		ng/L		91	30 - 150	0	50
Indeno[1,2,3-cd]pyrene	ND		79.9	3.12	J F	ng/L		4	30 - 150	19	50
Naphthalene	11	B	79.9	75.3		ng/L		80	27 - 95	2	50
Perylene	ND		79.9	9.32	F	ng/L		12	30 - 150	21	50
Phenanthrene	ND		79.9	66.8		ng/L		84	30 - 150	7	50
Pyrene	1.1	J B	79.9	63.4		ng/L		79	30 - 150	9	50
Quinoline	ND		79.9	77.4		ng/L		97	20 - 112	2	50
7,12-Dimethylbenz(a)anthracene	ND		79.9	70.0		ng/L		88	30 - 150	15	50
Biphenyl	ND		79.9	68.2		ng/L		85	30 - 150	4	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	46		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

GC/MS Semi VOA

Prep Batch: 126003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30428-1	SLP11-062512	Total/NA	Water	3520C	
280-30428-1 MS	SLP11-062512	Total/NA	Water	3520C	
280-30428-1 MSD	SLP11-062512	Total/NA	Water	3520C	
280-30428-2	SLP11D-062512	Total/NA	Water	3520C	
280-30428-3	SLP11FB-062512	Total/NA	Water	3520C	
280-30428-4	E2-062512	Total/NA	Water	3520C	
280-30428-5	E3-062512	Total/NA	Water	3520C	
280-30428-6	E15-062512	Total/NA	Water	3520C	
280-30428-7	E13-062512	Total/NA	Water	3520C	
280-30428-8	SLP12-062512	Total/NA	Water	3520C	
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126003/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 129031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30428-1	SLP11-062512	Total/NA	Water	8270C	126003
280-30428-1 MS	SLP11-062512	Total/NA	Water	8270C	126003
280-30428-1 MSD	SLP11-062512	Total/NA	Water	8270C	126003
280-30428-2	SLP11D-062512	Total/NA	Water	8270C	126003
280-30428-3	SLP11FB-062512	Total/NA	Water	8270C	126003
280-30428-4	E2-062512	Total/NA	Water	8270C	126003
280-30428-5	E3-062512	Total/NA	Water	8270C	126003
280-30428-6	E15-062512	Total/NA	Water	8270C	126003
280-30428-7	E13-062512	Total/NA	Water	8270C	126003
280-30428-8	SLP12-062512	Total/NA	Water	8270C	126003
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	8270C	126003
MB 280-126003/1-A	Method Blank	Total/NA	Water	8270C	126003

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: SLP11-062512

Date Collected: 06/25/12 10:35

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3546.3 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 17:40	KGV	TAL DEN

Client Sample ID: SLP11D-062512

Date Collected: 06/25/12 10:35

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3485 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 19:28	KGV	TAL DEN

Client Sample ID: SLP11FB-062512

Date Collected: 06/25/12 10:35

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3619.9 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 20:04	KGV	TAL DEN

Client Sample ID: E2-062512

Date Collected: 06/25/12 12:25

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3467.6 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 20:40	KGV	TAL DEN

Client Sample ID: E3-062512

Date Collected: 06/25/12 12:40

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3865.7 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 21:16	KGV	TAL DEN

Client Sample ID: E15-062512

Date Collected: 06/25/12 13:00

Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3696.3 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 21:51	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
 Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Client Sample ID: E13-062512
Date Collected: 06/25/12 13:15
Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3702.2 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 22:27	KGV	TAL DEN

Client Sample ID: SLP12-062512
Date Collected: 06/25/12 13:40
Date Received: 06/26/12 09:30

Lab Sample ID: 280-30428-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3485.3 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129031	07/20/12 23:02	KGV	TAL DEN

Laboratory References:
 TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30428-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-12
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-31-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-12
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-12
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-12
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-12
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

TAL-4124-280 (0508)

Client: Summit Envirosolutions
Address: 1217 Bandana Blvd N.
City: St. Paul
State: MN
Zip Code: 55108
Project Name and Location (State): Reilly Site (MN)
Contract/Purchase Order/Quote No.: 0987-0009
Project Manager: Bill Greag
Telephone Number (Area Code)/Fax Number: (651) 262-4236
Site Contact: Bill Greag
Carrier/Waybill Number: FedEx
Date: 6/25/12
Lab Number: 160960
Page 1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		
SLP11-062512	6/25/12	10:35	X				6						X	
SLP11D-062512		10:35					6							
SLP11 MS-062512		10:35					6							
SLP11 MSD-062512		10:35					6							
SLP11 FB-062512		10:35					4							
E2-062512		12:25					6							
E3-062512		12:40					6							
E15-062512		13:00					6							
E13-062512		13:15					6							
SLP12-062512		13:40					6							

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown
Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other
Relinquished By: Peter Bell (Peter Bell)
Relinquished By: [Signature]
Date: 6/25/12
Time: 16:00
Received By: [Signature]
Date: 6/26/12
Time: 0930
Received By: [Signature]
Date: []
Time: []
Received By: [Signature]
Date: []
Time: []

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Login Number: 30428

List Source: TestAmerica Denver

List Number: 1

Creator: Paulsen, Lindsay T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA**

**ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-30428-1**

Analyses Performed

By:

**Test America Denver
Arvada, Colorado**

For:

**Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota**

February 26, 2013

St. Louis Park\280-30428PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for seven aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-30428-1 in a single data package. The following samples were reported:

SLP11-062512	SLP11D-062512	SLP11TFB-062512
E2-062512	E3-062512	E15-062512
E13-062512	SLP12-062512	

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, perylene, and benzo[k]fluoranthene in all field samples were qualified as estimated (J, UJ).
- Results for benzo[g,h,i] perylene in all samples except SLP11D-062512 and for dibenz[a,h]anthracene and indeno[1,2,3-cd]pyrene in all field samples were qualified as rejected (R) for non-detects.
- The result for benzo[g,h,i]perylene in SLP11D062512 was qualified as estimated (UJ).
- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, and benzo [g,h,i] perylene in E3-062512 and E15-062512 were qualified as estimated (L, UJ) and may be biased low.
- Results for 1-methylnaphthalene in SLP11-062512, E3-062512, E13-062512, and E15-062512; 2-methylnaphthalene in SLP11-062512, SLP12-062512, E13-052512, and E15-062512; acenaphthene in SLP11-062512, SLP11D-062512, SLP12-062512, and E2-062512; anthracene in E2-062512 and E13-062512; benzo [g,h,i] perylene in SLP11D-062512; carbazole in SLP11-062512 and E13-062512; fluoranthene in E13-062512; naphthalene in

SLP11D-062512, SLP11FB-062512, E2-062512, E15-062512, E13-062512, and SLP12-062512; and pyrene in SLP11-062512 and E2-062512 were qualified as not detected (U) at the reporting limit.

- Detected results for 2,3-dihydroindene in all samples except SLP11FB-062512 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Results for acridine in all samples were rejected (R).
- The result for 2,3-benzofuran in SLP11D-062512 was qualified as not detected (U) at the reporting limit, and the result for naphthalene and benzo(a)thiopene in SLP11-062512 was qualified as not detected (U) at the reported value or the reporting limit, whichever was greater.
- The results for 2,3-benzofuran and benzo[b]thiopene in SLP11D-062512; benzo[b]thiopene and anthracene in E2-062512; and 1-methylnaphthalene in E13-062512 were corrected to not detected (U) at the RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of June 25, 2012. The samples were shipped via Federal Express and received by the laboratory on June 26, 2012. The temperature of the coolers on receipt at the laboratory were noted on the COC and were acceptable (1.2° C to 3.2° C; criteria 4.0° C \pm 2.0° C). All samples were extracted on June 28, 2012, within the 7-day holding time for aqueous samples. All sample extracts were analyzed on July 20, 2012, within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "MSS_F". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were documented with summary forms and were acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on July 20, 2012, for most of the target compounds. For four of the target compounds, the low level standard was omitted from the IC. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial

instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. The following target compounds were reported in the method blank:

<u>Compound</u>	<u>Amount Reported (ng/L)</u>
1-methylnaphthalene	1.60
2-methylnaphthalene	1.94
acenaphthene	0.855
anthracene	2.00
benzo[a]anthracene	16.9
benzo[a]pyrene	
benzo[b]fluoranthene	15.1
benzo[k]fluoranthene	18.8
benzo[g,h,i]perylene	9.38
carbazole	0.795
chrysene	14.2
dibenz(a,h)anthracene	11.2
dibenzofuran	0.994
fluoranthene	2.27
indeno[1,2,3-cd]pyrene	16.1
naphthalene	1.35
pyrene	2.03

Results for reported compounds less than five times the amount detected in the method blank are qualified as not detected at the analyte-specific reporting limit. Results for 1-methylnaphthalene in SLP11-06252012, E3-06252012, E13-06252012, and E15-06252012; 2-methylnaphthalene in SLP11-06252012, SLP12-06252012, E13-06252012, and E15-06252012; acenaphthene in SLP11-06252012, SLP11D-06252012, SLP12-06252012, and E2-06252012; anthracene in E2-062512 and E13-062512; benzo [g,h,i] perylene in SLP11D-062512; carbazole in SLP11-062512 and E13-062512; fluoranthene in E13-062512; naphthalene in SLP11D-062512, SLP11FB-062512, E2-062512, E15-062512, E13-062512, and SLP12-062512; and pyrene in SLP11-062512 and E2-062512. were qualified as not detected (U) at the reporting limit due to sample concentrations detected within five-times the concentration found in the method blank.

Following qualification based on method blank contamination, 2,3-dihydroindene (1.9 ng/L) was reported in the field blank. Detected results for 2,3-dihydroindene in all field samples were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits with the exception of fluorene-d₁₀ in all samples except E3-062512 and E15-062512 (88 – 92%R; criteria 23-84%R) and chrysene-d₁₂ in E3-062512 and E15-062512 (25%R and 10%R, respectively; criteria 28-101%R). No results were qualified based on the fluorene-d₁₀ excursions since the upper limit of the acceptance criteria is low and the percent recoveries did not excessively exceed the limit.

Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, and benzo [g,h,i] perylene in E3-062512 and E15-062512 were qualified as estimated (UJ) and may be biased low due to the low recovery of chrysene-d₁₂. Indeno [1,2,3-cd] pyrene and dibenz (a,h) anthracene warranted qualification on this basis, but results were subsequently rejected (R) due to spike recoveries and the “R” qualifier takes precedence.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample SLP11-06252012. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Acridine	93	50	61	30-150 (25)	J/UJ
Benzo[a]pyrene	15	13		30-150 (25)	L/UJ
Benzo[e]pyrene	14	12		37-150 (25)	L/UJ
Benzo[b]fluoranthene	17	14		30-150 (25)	L/UJ
Benzo[k]fluoranthene	15	13		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	4		30-150 (25)	L/R
Dibenz[a,h]anthracene	4	3		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	5	4		30-150 (25)	L/R
Perylene	14	12	35	30-150 (25)	L/UJ

*based on amount recovered.

Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, perylene, and benzo[k]fluoranthene in all field samples were qualified as estimated (J, UJ) due to the unacceptable MS/MSD recoveries. The result for benzo[g,h,i]perylene in SLP11D062512 was qualified as estimated (UJ) because even though the MS/MSD recoveries were less than 10%, the laboratory had detected the analyte in the sample, but the result was qualified as not detected (U) due to method blank contamination. Results for benzo[g,h,i] perylene in all samples except SLP11D-062512 and for dibenz[a,h]anthracene and indeno[1,2,3-cd]pyrene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recovery.

Results for acridine warranted qualification on this basis but were subsequently rejected (R) due to the LCS results and that qualifier takes precedence.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of acridine, which was reported as not detected. Results for acridine in all samples were rejected (R) due to an unacceptable LCS recovery.

VII. Field Duplicate

Sample SLP11D-062512 was collected as a field duplicate of sample SLP11-062512. Following qualification due to associated blank contamination and failed ratio test (see Section IX), only 2,3-dibenzofuran (0.78 ng/L) was reported in SLP11D-062512, and naphthalene (11 ng/L) and benzo(a)thiopene (1.8 ng/L) were reported in SLP11-062512. The result for 2,3-dibenzofuran in SLP11D-062512 was qualified as not detected (U) at the reporting limit, and the results for naphthalene and benzo(a)thiopene in SLP11-062512 were qualified as not detected (U) at the reported value or the reporting limit, whichever was greater.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Ion chromatograms were not provided for any of the compounds reported in these samples. The data validation was completed on the assumption that all of the ratios for the paired ions were acceptable. The laboratory stated that they utilize an acceptance criteria of $\pm 20\%D$ for the ratio of the paired ions. For 2,3-benzofuran and benzo[b]thiopene in SLP11D-062512, benzo[b]thiopene and anthracene in E2-062512, and 1-methylnaphthalene in E13-062512 and SLP12-062512, there is a "Q" qualifier on the quantitation report which indicates that the signal failed the ratio test, yet the analyte was reported by the laboratory. The results for 2,3-benzofuran and benzo[b]thiopene in SLP11D-062512, benzo[b]thiopene and anthracene in E2-062512, and 1-methylnaphthalene in E13-062512 were corrected to not detected (U) at the RL on this basis.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limits for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene. The laboratory eliminated the low level standard from the IC for the analytes noted above, but did not adjust the reporting limits on the organic analysis report sheets. The actual reporting

limits were calculated by the validator, replaced on the report sheets, and included on the data summary forms included with this report. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). In most cases, the reporting limits were based on the project required reporting limits from the QAPP. All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data and summary forms provided in the data package.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- The RLs for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene were reported incorrectly on the laboratory reporting forms (section X).
- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

- No ratios or spectra were included in the data package to support the identification of the reported compounds.

These documentation issues may affect the technical usability of the data and would be problematic if the data were used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, perylene, and benzo[k]fluoranthene in all field samples were qualified as estimated (J, UJ) due to the unacceptable MS/MSD recoveries.
- Results for benzo[g,h,i] perylene in all samples except SLP11D-062512 and for dibenz[a,h]anthracene and indeno[1,2,3-cd]pyrene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recovery. The result for benzo[g,h,i]perylene in SLP11D062512 was qualified as estimated (UJ) because even though the MS/MSD recoveries were less than 10%, the laboratory had detected the analyte in the sample, but the result was qualified as not detected (U) due to method blank contamination.
- Detected results for 2,3-dihydroindene in all samples except SLP11FB-062512 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to field blank contamination.
- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, and benzo [g,h,i] perylene in E3-062512 and E15-062512 were qualified as estimated (UJ) and may be biased low due to the low recovery of chrysene-d₁₂.
- Results for 1-methylnaphthalene in SLP11-062512, E3-062512, E13-062512, and E15-062512; 2-methylnaphthalene in SLP11-062512, SLP12-062512, E13-052512, and E15-062512; acenaphthene in SLP11-062512, SLP11D-062512, SLP12-062512, and E2-062512; anthracene in E2-062512 and E13-062512; benzo [g,h,i] perylene in SLP11D-062512; carbazole in SLP11-062512 and E13-062512; fluoranthene in E13-062512; naphthalene in SLP11D-062512, SLP11FB-062512, E2-062512, E15-062512, E13-062512,

and SLP12-062512; and pyrene in SLP11-062512 and E2-062512. were qualified as not detected (U) at the reporting limit due to sample concentrations detected within five-times the concentration found in the method blank.

- Results for acridine in all samples were rejected (R) due to an unacceptable LCS recovery.
- The result for 2,3-benzofuran in SLP11D-062512 was qualified as not detected (U) at the reporting limit, and the result for naphthalene and benzo(a)thiopene in SLP11-062512 was qualified as not detected (U) at the reported value or the reporting limit, whichever was greater, due to failure to confirm in the paired field sample.
- The results for 2,3-benzofuran and benzo[b]thiopene in SLP11D-062512; benzo[b]thiopene and anthracene in E2-062512; and 1-methylnaphthalene in E13-062512 were corrected to not detected (U) at the RL on this basis because in each case the signal failed the ratio test.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ATTACHMENT A

**DATA SUMMARY FORMS
Laboratory Job No. 280-30428
PAHs in Water**

[illegible]

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25, 2012

Job No. 280-30428-1

ddms Project No. 2006-0022

[illegible]

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS
Laboratory Job No. 280-30428
PAHs in Water

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: SLP11-062512

Lab Sample ID: 280-30428-1

Client Matrix: Water

Date Sampled: 06/25/2012 1035

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5271.D
Dilution:	1.0			Initial Weight/Volume:	3546.3 mL
Analysis Date:	07/20/2012 1740			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.77	6.1
2,3-Dihydroindene	3.9	J U	0.79	5.6
1-Methylnaphthalene	5.4	JB U	1.0	6.3
2-Methylnaphthalene	5.6	JB U	1.1	6.7
Acenaphthene	2.8	JB	0.56	6.4
Acenaphthylene	ND		0.87	5.4
Acridine	ND	*	7.3	7.3
Anthracene	ND		0.90	4.7
Benzo[a]anthracene	ND		1.0	4.9
Benzo[a]pyrene	ND	US	1.4	2.8
Benzo[e]pyrene	ND		1.3	4.9
Benzo[b]fluoranthene	ND		1.6	5.3
Benzo(b)thiophene	1.8	J U	0.85	5.9
Benzo[k]fluoranthene	ND	US	1.4	4.6
Benzo[g,h,i]perylene	ND		1.3	7.0
Carbazole	0.82	JB U	0.81	4.3
Chrysene	ND		1.4	6.3
Dibenz(a,h)anthracene	ND		1.2	6.7
Dibenzofuran	ND		1.1	6.4
Dibenzothiophene	ND		1.1	4.6
Fluoranthene	ND		1.9	5.2
Fluorene	ND		0.96	4.6
Indene	ND		3.7	5.3
Indole	ND		2.0	5.3
Indeno[1,2,3-cd]pyrene	ND		1.4	6.1
Naphthalene	11	B U	1.3	9.7
Perylene	ND	US	4.3	4.3
Phenanthrene	ND		3.6	7.1
Pyrene	1.1	JB U	1.1	4.7
Quinoline	ND		6.4	10
Biphenyl	ND		1.2	6.3

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	40		28 - 101
Naphthalene-d8 (Surr)	91		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: SLP11D-062512

Lab Sample ID: 280-30428-2FD

Client Matrix: Water

Date Sampled: 06/25/2012 1035

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5274.D
Dilution:	1.0			Initial Weight/Volume:	3485 mL
Analysis Date:	07/20/2012 1928			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.78	J U	0.78	6.2
2,3-Dihydroindene	3.5	J U	0.80	5.7
1-Methylnaphthalene	ND		1.0	6.4
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthene	1.8	JB U	0.57	6.5
Acenaphthylene	ND		0.88	5.5
Acridine	ND	*	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	ND	U S	1.4	2.9
Benzo[e]pyrene	ND	J	1.3	4.9
Benzo[b]fluoranthene	ND	J U	1.6	5.4
Benzo(b)thiophene	1.7	J U	0.86	6.0
Benzo[k]fluoranthene	ND	U S	1.4	4.7
Benzo[g,h,i]perylene	1.3	JB U S	1.3	7.1
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	ND		1.2	6.8
Dibenzofuran	ND		1.1	6.5
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	ND		1.4	6.2
Naphthalene	5.5	JB U	1.3	9.9
Perylene	ND	U S	4.4	4.4
Phenanthrene	ND		3.7	7.2
Pyrene	ND		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	89	X	23 - 84
Chrysene-d12 (Surr)	58		28 - 101
Naphthalene-d8 (Surr)	90		22 - 97

Dolly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: SLP11FB-062512

Lab Sample ID: 280-30428-3FB

Date Sampled: 06/25/2012 1035

Client Matrix: Water

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5275.D
Dilution:	1.0			Initial Weight/Volume:	3619.9 mL
Analysis Date:	07/20/2012 2004			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.75	6.0
2,3-Dihydroindene	1.9	J	0.77	5.5
1-Methylnaphthalene	ND		0.98	6.2
2-Methylnaphthalene	ND		1.1	6.5
Acenaphthene	ND		0.55	6.3
Acenaphthylene	ND		0.85	5.3
Acridine	ND	*	7.2	7.2
Anthracene	ND		0.88	4.6
Benzo[a]anthracene	ND		1.0	4.8
Benzo[a]pyrene	ND	US	1.4	2.8
Benzo[e]pyrene	ND	US	1.3	4.8
Benzo[b]fluoranthene	ND	US	1.5	5.2
Benzo(b)thiophene	ND		0.83	5.7
Benzo[k]fluoranthene	ND	US	1.4	4.5
Benzo[g,h,i]perylene	ND		1.3	6.9
Carbazole	ND		0.80	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	ND		1.1	6.5
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.94	4.5
Indene	ND		3.6	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	ND		1.4	6.0
Naphthalene	6.0	JB US	1.3	9.5
Perylene	ND	US	4.2	4.2
Phenanthrene	ND		3.5	7.0
Pyrene	ND		1.1	4.6
Quinoline	ND		6.2	9.9
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	91	X	23 - 84
Chrysene-d12 (Surr)	92		28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

Dolly J. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: E2-062512

Lab Sample ID: 280-30428-4

Client Matrix: Water

Date Sampled: 06/25/2012 1225

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5276.D
Dilution:	1.0			Initial Weight/Volume:	3467.6 mL
Analysis Date:	07/20/2012 2040			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	2.4	J U	0.81	5.8
1-Methylnaphthalene	ND		1.0	6.5
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthene	0.70	JB U	0.58	6.6
Acenaphthylene	ND		0.89	5.5
Acridine	R ND	*	7.5	7.5
Anthracene	1.1	JB U	0.92	4.8
Benzo[a]anthracene	ND		1.1	5.0
Benzo[a]pyrene	ND	US	1.4	2.9
Benzo[e]pyrene	ND	I	1.3	5.0
Benzo[b]fluoranthene	ND	J U	1.6	5.4
Benzo(b)thiophene	2.5	J U	0.87	6.0
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	R ND		1.3	7.2
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.5
Dibenz(a,h)anthracene	R ND		1.2	6.8
Dibenzofuran	ND		1.1	6.6
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ND		1.5	6.2
Naphthalene	3.5	JB U	1.3	9.9
Perylene	ND	US	4.4	4.4
Phenanthrene	ND		3.7	7.3
Pyrene	2.5	JB U	1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	53		28 - 101
Naphthalene-d8 (Surr)	82		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: E3-062512

Lab Sample ID: 280-30428-5

Client Matrix: Water

Date Sampled: 06/25/2012 1240

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5277.D
Dilution:	1.0			Initial Weight/Volume:	3865.7 mL
Analysis Date:	07/20/2012 2116			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.6
2,3-Dihydroindene	14		0.72	5.2
1-Methylnaphthalene	1.1	JB u	0.92	5.8
2-Methylnaphthalene	2.2	JB u	1.0	6.1
Acenaphthene	ND		0.52	5.9
Acenaphthylene	ND		0.80	5.0
Acridine	ND	*	6.7	6.7
Anthracene	ND		0.83	4.3
Benzo[a]anthracene	ND	uS	0.95	4.4
Benzo[a]pyrene	ND		1.3	2.6
Benzo[e]pyrene	ND	I	1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	ND	uS	1.3	4.2
Benzo[g,h,i]perylene	ND		1.2	6.4
Carbazole	ND		0.75	3.9
Chrysene	ND	uS	1.3	5.8
Dibenz(a,h)anthracene	ND		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.8
Fluorene	ND		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND		1.3	5.6
Naphthalene	13 13	B uS	1.2	8.9
Perylene	ND	uS	3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	ND		1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	25	X	28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

Dolly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: E15-062512

Lab Sample ID: 280-30428-6

Date Sampled: 06/25/2012 1300

Client Matrix: Water

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5278.D
Dilution:	1.0			Initial Weight/Volume:	3696.3 mL
Analysis Date:	07/20/2012 2151			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.74	5.8
2,3-Dihydroindene	1.1	J	0.76	5.4
1-Methylnaphthalene	ND		0.96	6.1
2-Methylnaphthalene	1.2	JB U	1.1	6.4
Acenaphthene	1.1	JB U	0.54	6.2
Acenaphthylene	ND		0.83	5.2
Acridine	ND	*	7.0	7.0
Anthracene	ND		0.87	4.5
Benzo[a]anthracene	ND	US	1.0	4.7
Benzo[a]pyrene	ND	I	1.3	2.7
Benzo[e]pyrene	ND		1.2	4.7
Benzo[b]fluoranthene	ND		1.5	5.1
Benzo(b)thiophene	ND		0.81	5.6
Benzo[k]fluoranthene	ND	US	1.3	4.4
Benzo[g,h,i]perylene	ND		1.3	6.7
Carbazole	ND		0.78	4.1
Chrysene	ND	US	1.3	6.1
Dibenz(a,h)anthracene	ND		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	5.0
Fluorene	ND		0.92	4.4
Indene	ND		3.5	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	ND		1.4	5.8
Naphthalene	3.3	JB U	1.2	9.3
Perylene	ND	US	4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	ND		1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	71		23 - 84
Chrysene-d12 (Surr)	10	X	28 - 101
Naphthalene-d8 (Surr)	68		22 - 97

Dolly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: E13-062512

Lab Sample ID: 280-30428-7

Client Matrix: Water

Date Sampled: 06/25/2012 1315

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5279.D
Dilution:	1.0			Initial Weight/Volume:	3702.2 mL
Analysis Date:	07/20/2012 2227			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	8.6	u	0.76	5.4
1-Methylnaphthalene	4.1	JB u	0.96	6.1
2-Methylnaphthalene	4.8	JB u	1.1	6.4
Acenaphthene	140	B	0.54	6.2
Acenaphthylene	14		0.83	5.2
Acridine	ND	*	7.0	7.0
Anthracene	1.2	JB u	0.86	4.5
Benzo[a]anthracene	ND		0.99	4.6
Benzo[a]pyrene	ND	uS	1.3	2.7
Benzo[e]pyrene	ND	I	1.2	4.6
Benzo[b]fluoranthene	ND		1.5	5.1
Benzo(b)thiophene	ND		0.81	5.6
Benzo[k]fluoranthene	ND	uS	1.3	4.4
Benzo[g,h,i]perylene	ND		1.3	6.7
Carbazole	1.1	JB u	0.78	4.1
Chrysene	ND		1.3	6.1
Dibenz(a,h)anthracene	ND		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	3.4	J u	1.1	4.4
Fluoranthene	3.2	JB u	1.8	5.0
Fluorene	1.3	J	0.92	4.4
Indene	ND		3.5	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	ND		1.4	5.8
Naphthalene	6.8	JB u	1.2	9.3
Perylene	ND	uS	4.1	4.1
Phenanthrene	5.0	J	3.5	6.8
Pyrene	13	B	1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	92	X	23 - 84
Chrysene-d12 (Surr)	47		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Polly J. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30428-1

Client Sample ID: SLP12-062512

Lab Sample ID: 280-30428-8

Date Sampled: 06/25/2012 1340

Client Matrix: Water

Date Received: 06/26/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129031	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5280.D
Dilution:	1.0			Initial Weight/Volume:	3485.3 mL
Analysis Date:	07/20/2012 2302			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	4.5	J U	0.80	5.7
1-Methylnaphthalene	ND		1.0	6.4
2-Methylnaphthalene	1.5	JB U	1.1	6.8
Acenaphthene	0.76	JB U	0.57	6.5
Acenaphthylene	ND		0.88	5.5
Acridine	ND	*	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	ND	US	1.4	2.9
Benzo[e]pyrene	ND	I	1.3	4.9
Benzo[b]fluoranthene	ND		1.6	5.4
Benzo(b)thiophene	ND		0.86	6.0
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	ND		1.3	7.1
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	ND		1.2	6.8
Dibenzofuran	ND		1.1	6.5
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	ND		1.4	6.2
Naphthalene	8.6	JB U	1.3	9.9
Perylene	ND	US	4.4	4.4
Phenanthrene	ND		3.7	7.2
Pyrene	ND		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	90	X	23 - 84	
Chrysene-d12 (Surr)	58		28 - 101	
Naphthalene-d8 (Surr)	84		22 - 97	

Golly S. Newbold
2/26/2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-30464-1

Client Project/Site: CSLP - Reilly Tar & Chemical

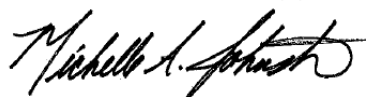
For:

Summit Envirosolutions Inc

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-30464-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Thirteen samples were received under chain of custody on June 27, 2012. The samples were received at temperatures of 4.3°C, 3.5°C, 4.9°C, 4.5°C, 5.1°C, 4.7°C, 3.8°C, 3.0°C, 2.3°C and 3.7°C.

One of 2x1 Liter amber bottles was received at the laboratory broken for sample SLP10TACID-062612 (280-30464-12). Sufficient volume remained to proceed with the requested analysis. The client was notified on June 27, 2012.

No other anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C

All sample holding times were met.

The method required MS/MSD could not be performed for prep batch 280-125974, due to insufficient sample volume.

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

MTKA6-062612 (280-30464-1) had an initial volume of 3585.3 mL
H6-062612 (280-30464-2) had an initial volume of 3812 mL
SLP16-062612 (280-30464-3) had an initial volume of 3803.4 mL
SLP6-062612 (280-30464-4) had an initial volume of 3906.6 mL
SLP13-062612 (280-30464-5) had an initial volume of 3473.1 mL
SLP14-062612 (280-30464-6) had an initial volume of 3484.8 mL
SLP10-062612 (280-30464-7) had an initial volume of 3764.3 mL
SLP10D-062612 (280-30464-8) had an initial volume of 3850.1 mL
SLP10FB-062612 (280-30464-9) had an initial volume of 3613.4 mL
SLP10T-062612 (280-30464-10) had an initial volume of 340.2 mL
SLP10TEXTENDED-062612 (280-30464-11) had an initial volume of 3638.4 mL
SLPFEED-062612 (280-30464-13) had an initial volume of 3484.1 mL

The following samples were analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Only those compounds that were within the linear range were reported in each dilution in order to achieve the lowest reporting limits possible within the constraints of the method. Surrogate recoveries could not be calculated for the analysis performed at a dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

SLP10-062612 (280-30464-7) was analyzed at a 1X and a 4X dilution
SLP10D-062612 (280-30464-8) was analyzed at a 1X and a 4X dilution
SLPFEED-062612 (280-30464-13) was analyzed at a 1X and a 4X dilution

Surrogate Fluorene-d10 was recovered outside the QC control limits in the following samples, as detailed below. Matrix interference was not obvious. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

MTKA6-062612 (280-30464-1) recovered Fluorene-d10 at 87% (limits 23-84%)
SLP6-062612 (280-30464-4) recovered Fluorene-d10 at 88% (limits 23-84%)
SLP10D-062612 (280-30464-8) recovered Fluorene-d10 at 86% (limits 23-84%)
SLP10FB-062612 (280-30464-9) recovered Fluorene-d10 at 85% (limits 23-84%)
SLP10T-062612 (280-30464-10) recovered Fluorene-d10 at 86% (limits 23-84%)
SLP10TEXTENDED-062612 (280-30464-11) recovered Fluorene-d10 at 87% (limits 23-84%)
SLPFEED-062612 (280-30464-13) recovered Fluorene-d10 at 91% (limits 23-84%)

Low levels of several analytes are present in the method blank associated with prep batch 280-126003. Because the concentrations in the method blank are not present at levels greater than one half the reporting limits, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

A low level of Fluoranthene is present in the method blank associated with prep batch 280-126003. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

Additionally, levels of Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Chrysene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene are present in the method blank associated with prep batch 280-126003 at levels above the RL. The associated positive results in the analytical report have been flagged with "B". Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is.

Low levels of several analytes are present in the method blank associated with prep batch 280-126251. Because the concentrations in the method blank are not present at levels greater than one half the reporting limits, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

The LCS associated with prep batches 280-126003 and 280-126251 exhibited percent recoveries below the QC control limits for Acridine at 8% and 28%, respectively (limits 30-150%). Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

The MS/MSD associated with prep batch 280-126003 was performed using a sample from another job. MS/MSD exhibited 10 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited 1 of the 33 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylchloranthrene	Acridine	Benzo[a]pyrene
Benzo[e]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene
Benzo[ghi]perylene	Dibenzo(a,h)anthracene	Indene
Indeno[1,2,3-cd]pyrene	Perylene	Fulorene-d10

The MS/MSD associated with prep batch 280-129124 was performed using sample SLP10-062612 (280-30464-7), as requested. MS/MSD exhibited 11 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 12 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylchloranthrene	Acenaphthene	Acridine
Benzo[a]pyrene	Benzo[e]pyrene	Benzo[b]fluoranthene
Benzo[k]fluoranthene	Benzo[ghi]perylene	Dibenzo(a,h)anthracene Indene
Fluorene	Indene	Indeno[1,2,3-cd]pyrene
Perylene	Fulorene-d10	

The initial calibration verification (ICV) associated with analytical batches 280-129031 and 280-129124 exhibited recoveries above the QC control limits for Benzo(a)anthracene at 59.9% D and % D, respectively. This is an indicator that the data may be biased high. As no detectable concentrations of Benzo(a)anthracene are present in the associated samples greater than the reporting limit, corrective action is deemed unnecessary.

No other anomalies were noted.

Data Completeness for Method 8270C Acid Compounds

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below.

DATA COMPLETENES CALCULATION		
JOB 280-30464-1		
ANALYSIS: Acid Compounds by SW846		
8270C		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	11	11
MB Surrogates	5	5
FB/FBD	NA	NA
MS	NA	NA
MS Surrogates	NA	NA
MSD	NA	NA
MSD Surrogates	NA	NA
MS/MSD RPD	NA	NA
Sample/Dup. RPD	NA	NA
LCS/LCSD	32	32
LCS/LCSD Surrogates	12	12
Sample Surrogates	5	5
Samples and QC Internal Standard Area	12	12
TOTAL	77	77
% Completeness	100.00%	

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-30464-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	54
MB Surrogates	6	6
LCS	14	12
LCS Surrogates	6	6
FB	31	31
MS	14	10
MS Surrogates	6	4
MSD	14	11
MSD Surrogates	6	4
MS/MSD RPD	14	14
Sample/Dup. RPD	31	31
Sample Surrogates	36	29
Samples and QC Internal Standard Area	60	60
TOTAL	300	272
% Completeness	90.7%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-30464-1					
Sample: SLP10-062612			DUP: SLP10D-062612		
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	730	Acenaphthene	ND	NC	
Acenaphthylene	75	Acenaphthylene	77	2.6	
Acridine	ND	Acridine	ND	0.0	
Anthracene	5.9	Anthracene	6.3	6.6	
Benzo(a)anthracene	2.1	Benzo(a)anthracene	2.0	4.9	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	1.4	NC	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	63	Benzo(b)thiophene	65	3.1	
Biphenyl	5.3	Biphenyl	5.6	5.5	
Carbazole	34	Carbazole	33	3.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	19	Dibenzofuran	20	5.1	
Dibenzothiophene	34	Dibenzothiophene	34	0.0	
2,3-Dihydroindene	250	2,3-Dihydroindene	260	3.9	
Fluoranthene	70	Fluoranthene	69	1.4	
Fluorene	200	Fluorene	210	4.9	
Indene	92	Indene	95	3.2	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	110	1-Methylnaphthalene	110	0.0	
Naphthalene	8.0	Naphthalene	9.5	17.1	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	15	Phenanthrene	14	6.9	
Pyrene	90	Pyrene	90	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits
B	Compound was found in the blank and sample.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
E	Result exceeded calibration range.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: MTKA6-062612

Lab Sample ID: 280-30464-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.7	J	5.6	0.78	ng/L	1		8270C	Total/NA
Naphthalene	4.4	J B	9.6	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: H6-062612

Lab Sample ID: 280-30464-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.9	J	5.2	0.73	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.0	J B	5.9	0.93	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.1	J B	6.2	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	28	B	6.0	0.52	ng/L	1		8270C	Total/NA
Acenaphthylene	4.1	J	5.0	0.81	ng/L	1		8270C	Total/NA
Dibenzothiophene	2.3	J	4.3	1.0	ng/L	1		8270C	Total/NA
Fluorene	1.2	J	4.3	0.89	ng/L	1		8270C	Total/NA
Naphthalene	4.4	J	9.0	1.2	ng/L	1		8270C	Total/NA
Pyrene	2.2	J	4.4	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: SLP16-062612

Lab Sample ID: 280-30464-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	0.95	J	5.3	0.74	ng/L	1		8270C	Total/NA
Naphthalene	2.6	J	9.0	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: SLP6-062612

Lab Sample ID: 280-30464-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	0.96	J	5.5	0.70	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	58		5.1	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	10	B	5.7	0.91	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	9.9	B	6.0	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	88	B	5.8	0.51	ng/L	1		8270C	Total/NA
Acenaphthylene	13		4.9	0.79	ng/L	1		8270C	Total/NA
Acridine	9.0	*	6.7	6.7	ng/L	1		8270C	Total/NA
Anthracene	4.0	J	4.3	0.82	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	12		5.3	0.77	ng/L	1		8270C	Total/NA
Carbazole	3.0	J	3.9	0.74	ng/L	1		8270C	Total/NA
Dibenzofuran	1.8	J B	5.8	1.0	ng/L	1		8270C	Total/NA
Dibenzothiophene	2.0	J	4.2	1.0	ng/L	1		8270C	Total/NA
Fluoranthene	3.3	J	4.7	1.7	ng/L	1		8270C	Total/NA
Fluorene	1.3	J	4.2	0.87	ng/L	1		8270C	Total/NA
Indene	8.3		4.8	3.4	ng/L	1		8270C	Total/NA
Naphthalene	14		8.8	1.2	ng/L	1		8270C	Total/NA
Pyrene	4.8		4.3	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: SLP13-062612

Lab Sample ID: 280-30464-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	2.0	J	5.8	0.81	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.3	J B	6.4	1.0	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.8	J B	6.8	1.1	ng/L	1		8270C	Total/NA
Naphthalene	6.1	J	9.9	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP14-062612

Lab Sample ID: 280-30464-6

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP14-062612 (Continued)

Lab Sample ID: 280-30464-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	2.4	J	5.7	0.80	ng/L	1			8270C	Total/NA
Acenaphthene	2.9	J B	6.5	0.57	ng/L	1			8270C	Total/NA
Acenaphthylene	1.1	J	5.5	0.88	ng/L	1			8270C	Total/NA
Naphthalene	2.4	J	9.9	1.3	ng/L	1			8270C	Total/NA
Pyrene	1.1	J	4.8	1.1	ng/L	1			8270C	Total/NA

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	250		5.3	0.74	ng/L	1			8270C	Total/NA
1-Methylnaphthalene	110	B	6.0	0.95	ng/L	1			8270C	Total/NA
Acenaphthylene	75		5.1	0.82	ng/L	1			8270C	Total/NA
Anthracene	5.9		4.5	0.85	ng/L	1			8270C	Total/NA
Benzo[a]anthracene	2.1	J	4.6	0.98	ng/L	1			8270C	Total/NA
Benzo(b)thiophene	63		5.5	0.80	ng/L	1			8270C	Total/NA
Carbazole	34		4.0	0.77	ng/L	1			8270C	Total/NA
Dibenzofuran	19	B	6.1	1.1	ng/L	1			8270C	Total/NA
Dibenzothiophene	34		4.4	1.0	ng/L	1			8270C	Total/NA
Fluoranthene	70		4.9	1.8	ng/L	1			8270C	Total/NA
Fluorene	200		4.4	0.90	ng/L	1			8270C	Total/NA
Indene	92		5.0	3.5	ng/L	1			8270C	Total/NA
Naphthalene	8.0	J	9.1	1.2	ng/L	1			8270C	Total/NA
Phenanthrene	15		6.7	3.4	ng/L	1			8270C	Total/NA
Pyrene	90		4.5	1.1	ng/L	1			8270C	Total/NA
Biphenyl	5.3	J	6.0	1.1	ng/L	1			8270C	Total/NA
Acenaphthene - DL	730	B	24	2.1	ng/L	4			8270C	Total/NA

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Benzofuran	1.4	J	5.6	0.71	ng/L	1			8270C	Total/NA
2,3-Dihydroindene	260		5.2	0.73	ng/L	1			8270C	Total/NA
1-Methylnaphthalene	110	B	5.8	0.92	ng/L	1			8270C	Total/NA
Acenaphthylene	77		5.0	0.80	ng/L	1			8270C	Total/NA
Anthracene	6.3		4.4	0.83	ng/L	1			8270C	Total/NA
Benzo[a]anthracene	2.0	J	4.5	0.96	ng/L	1			8270C	Total/NA
Benzo(b)thiophene	65		5.4	0.78	ng/L	1			8270C	Total/NA
Carbazole	33		3.9	0.75	ng/L	1			8270C	Total/NA
Dibenzofuran	20	B	5.9	1.0	ng/L	1			8270C	Total/NA
Dibenzothiophene	34		4.3	1.0	ng/L	1			8270C	Total/NA
Fluoranthene	69		4.8	1.8	ng/L	1			8270C	Total/NA
Fluorene	210		4.3	0.88	ng/L	1			8270C	Total/NA
Indene	95		4.9	3.4	ng/L	1			8270C	Total/NA
Naphthalene	9.5		8.9	1.2	ng/L	1			8270C	Total/NA
Phenanthrene	14		6.5	3.3	ng/L	1			8270C	Total/NA
Pyrene	90		4.4	1.0	ng/L	1			8270C	Total/NA
Biphenyl	5.6	J	5.8	1.1	ng/L	1			8270C	Total/NA
Acenaphthene - DL	780	B	24	2.1	ng/L	4			8270C	Total/NA

Client Sample ID: SLP10FB-062612

Lab Sample ID: 280-30464-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	2.7	J	5.5	0.77	ng/L	1			8270C	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10FB-062612 (Continued)

Lab Sample ID: 280-30464-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	1.2	J B	6.5	1.1	ng/L	1		8270C	Total/NA
Naphthalene	5.3	J	9.5	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10T-062612

Lab Sample ID: 280-30464-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	44		5.9	0.82	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	6.1	J B	6.6	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	31	B	6.7	0.59	ng/L	1		8270C	Total/NA
Acenaphthylene	1.6	J	5.6	0.90	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	3.8	J	6.1	0.88	ng/L	1		8270C	Total/NA
Fluorene	2.6	J	4.8	1.0	ng/L	1		8270C	Total/NA
Naphthalene	3.6	J	10	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	46		5.5	0.77	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	6.2	B	6.2	0.98	ng/L	1		8270C	Total/NA
Acenaphthene	32	B	6.3	0.55	ng/L	1		8270C	Total/NA
Acenaphthylene	1.7	J	5.3	0.85	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	3.8	J	5.7	0.82	ng/L	1		8270C	Total/NA
Fluorene	2.6	J	4.5	0.93	ng/L	1		8270C	Total/NA
Indene	3.6	J	5.2	3.6	ng/L	1		8270C	Total/NA
Naphthalene	3.8	J	9.5	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

No Detections

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.3	J	6.2	0.78	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	280		5.7	0.80	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	110	B	6.4	1.0	ng/L	1		8270C	Total/NA
Acenaphthylene	50		5.5	0.88	ng/L	1		8270C	Total/NA
Anthracene	2.1	J	4.8	0.92	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	70		6.0	0.86	ng/L	1		8270C	Total/NA
Carbazole	22		4.4	0.83	ng/L	1		8270C	Total/NA
Dibenzofuran	22	B	6.5	1.1	ng/L	1		8270C	Total/NA
Dibenzothiophene	33		4.7	1.1	ng/L	1		8270C	Total/NA
Fluoranthene	63		5.3	1.9	ng/L	1		8270C	Total/NA
Fluorene	220		4.7	0.98	ng/L	1		8270C	Total/NA
Indene	69		5.4	3.8	ng/L	1		8270C	Total/NA
Naphthalene	9.4	J	9.9	1.3	ng/L	1		8270C	Total/NA
Phenanthrene	15		7.2	3.7	ng/L	1		8270C	Total/NA
Pyrene	56		4.8	1.1	ng/L	1		8270C	Total/NA
Biphenyl	6.1	J	6.4	1.2	ng/L	1		8270C	Total/NA
Acenaphthene - DL	700	B	26	2.3	ng/L	4		8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-30464-1	MTKA6-062612	Water	06/26/12 09:10	06/27/12 09:45
280-30464-2	H6-062612	Water	06/26/12 09:55	06/27/12 09:45
280-30464-3	SLP16-062612	Water	06/26/12 11:20	06/27/12 09:45
280-30464-4	SLP6-062612	Water	06/26/12 11:50	06/27/12 09:45
280-30464-5	SLP13-062612	Water	06/26/12 12:15	06/27/12 09:45
280-30464-6	SLP14-062612	Water	06/26/12 12:20	06/27/12 09:45
280-30464-7	SLP10-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-8	SLP10D-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-9	SLP10FB-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-10	SLP10T-062612	Water	06/26/12 13:30	06/27/12 09:45
280-30464-11	SLP10TEXTENDED-062612	Water	06/25/12 13:30	06/27/12 09:45
280-30464-12	SLP10TACID-062612	Water	06/25/12 13:30	06/27/12 09:45
280-30464-13	SLPFEED-062612	Water	06/25/12 13:45	06/27/12 09:45

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: MTKA6-062612

Lab Sample ID: 280-30464-1

Date Collected: 06/26/12 09:10

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.0	0.76	ng/L		06/28/12 18:05	07/21/12 18:17	1
2,3-Dihydroindene	1.7	J	5.6	0.78	ng/L		06/28/12 18:05	07/21/12 18:17	1
1-Methylnaphthalene	ND		6.2	0.99	ng/L		06/28/12 18:05	07/21/12 18:17	1
2-Methylnaphthalene	ND		6.6	1.1	ng/L		06/28/12 18:05	07/21/12 18:17	1
Acenaphthene	ND		6.4	0.56	ng/L		06/28/12 18:05	07/21/12 18:17	1
Acenaphthylene	ND		5.4	0.86	ng/L		06/28/12 18:05	07/21/12 18:17	1
Acridine	ND	*	7.3	7.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Anthracene	ND		4.7	0.89	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[b]fluoranthene	ND		5.2	1.6	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo(b)thiophene	ND		5.8	0.84	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[k]fluoranthene	ND		4.6	1.4	ng/L		06/28/12 18:05	07/21/12 18:17	1
Benzo[g,h,i]perylene	ND		6.9	1.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Carbazole	ND		4.2	0.80	ng/L		06/28/12 18:05	07/21/12 18:17	1
Chrysene	ND		6.2	1.4	ng/L		06/28/12 18:05	07/21/12 18:17	1
Dibenz(a,h)anthracene	ND		6.6	1.2	ng/L		06/28/12 18:05	07/21/12 18:17	1
Dibenzofuran	ND		6.4	1.1	ng/L		06/28/12 18:05	07/21/12 18:17	1
Dibenzothiophene	ND		4.6	1.1	ng/L		06/28/12 18:05	07/21/12 18:17	1
Fluoranthene	ND		5.1	1.9	ng/L		06/28/12 18:05	07/21/12 18:17	1
Fluorene	ND		4.6	0.95	ng/L		06/28/12 18:05	07/21/12 18:17	1
Indene	ND		5.2	3.7	ng/L		06/28/12 18:05	07/21/12 18:17	1
Indole	ND		5.2	1.9	ng/L		06/28/12 18:05	07/21/12 18:17	1
Indeno[1,2,3-cd]pyrene	ND		6.0	1.4	ng/L		06/28/12 18:05	07/21/12 18:17	1
Naphthalene	4.4	J B	9.6	1.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Perylene	ND		4.3	4.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Phenanthrene	ND		7.0	3.6	ng/L		06/28/12 18:05	07/21/12 18:17	1
Pyrene	ND		4.7	1.1	ng/L		06/28/12 18:05	07/21/12 18:17	1
Quinoline	ND		10	6.3	ng/L		06/28/12 18:05	07/21/12 18:17	1
Biphenyl	ND		6.2	1.2	ng/L		06/28/12 18:05	07/21/12 18:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	X	23 - 84	06/28/12 18:05	07/21/12 18:17	1
Chrysene-d12 (Surr)	52		28 - 101	06/28/12 18:05	07/21/12 18:17	1
Naphthalene-d8 (Surr)	87		22 - 97	06/28/12 18:05	07/21/12 18:17	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: H6-062612

Lab Sample ID: 280-30464-2

Date Collected: 06/26/12 09:55

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.71	ng/L		07/01/12 08:40	07/21/12 18:53	1
2,3-Dihydroindene	1.9	J	5.2	0.73	ng/L		07/01/12 08:40	07/21/12 18:53	1
1-Methylnaphthalene	1.0	J B	5.9	0.93	ng/L		07/01/12 08:40	07/21/12 18:53	1
2-Methylnaphthalene	1.1	J B	6.2	1.0	ng/L		07/01/12 08:40	07/21/12 18:53	1
Acenaphthene	28	B	6.0	0.52	ng/L		07/01/12 08:40	07/21/12 18:53	1
Acenaphthylene	4.1	J	5.0	0.81	ng/L		07/01/12 08:40	07/21/12 18:53	1
Acridine	ND	*	6.8	6.8	ng/L		07/01/12 08:40	07/21/12 18:53	1
Anthracene	ND		4.4	0.84	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo(b)thiophene	ND		5.5	0.79	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/01/12 08:40	07/21/12 18:53	1
Benzo[g,h,i]perylene	ND		6.5	1.2	ng/L		07/01/12 08:40	07/21/12 18:53	1
Carbazole	ND		4.0	0.76	ng/L		07/01/12 08:40	07/21/12 18:53	1
Chrysene	ND		5.9	1.3	ng/L		07/01/12 08:40	07/21/12 18:53	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		07/01/12 08:40	07/21/12 18:53	1
Dibenzofuran	ND		6.0	1.0	ng/L		07/01/12 08:40	07/21/12 18:53	1
Dibenzothiophene	2.3	J	4.3	1.0	ng/L		07/01/12 08:40	07/21/12 18:53	1
Fluoranthene	ND		4.8	1.8	ng/L		07/01/12 08:40	07/21/12 18:53	1
Fluorene	1.2	J	4.3	0.89	ng/L		07/01/12 08:40	07/21/12 18:53	1
Indene	ND		4.9	3.4	ng/L		07/01/12 08:40	07/21/12 18:53	1
Indole	ND		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 18:53	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		07/01/12 08:40	07/21/12 18:53	1
Naphthalene	4.4	J	9.0	1.2	ng/L		07/01/12 08:40	07/21/12 18:53	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 18:53	1
Phenanthrene	ND		6.6	3.4	ng/L		07/01/12 08:40	07/21/12 18:53	1
Pyrene	2.2	J	4.4	1.0	ng/L		07/01/12 08:40	07/21/12 18:53	1
Quinoline	ND		9.4	5.9	ng/L		07/01/12 08:40	07/21/12 18:53	1
Biphenyl	ND		5.9	1.1	ng/L		07/01/12 08:40	07/21/12 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	07/01/12 08:40	07/21/12 18:53	1
Chrysene-d12 (Surr)	39		28 - 101	07/01/12 08:40	07/21/12 18:53	1
Naphthalene-d8 (Surr)	83		22 - 97	07/01/12 08:40	07/21/12 18:53	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP16-062612

Lab Sample ID: 280-30464-3

Date Collected: 06/26/12 11:20

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		07/01/12 08:40	07/21/12 19:29	1
2,3-Dihydroindene	0.95	J	5.3	0.74	ng/L		07/01/12 08:40	07/21/12 19:29	1
1-Methylnaphthalene	ND		5.9	0.94	ng/L		07/01/12 08:40	07/21/12 19:29	1
2-Methylnaphthalene	ND		6.2	1.0	ng/L		07/01/12 08:40	07/21/12 19:29	1
Acenaphthene	ND		6.0	0.53	ng/L		07/01/12 08:40	07/21/12 19:29	1
Acenaphthylene	ND		5.0	0.81	ng/L		07/01/12 08:40	07/21/12 19:29	1
Acridine	ND	*	6.8	6.8	ng/L		07/01/12 08:40	07/21/12 19:29	1
Anthracene	ND		4.4	0.84	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo(b)thiophene	ND		5.5	0.79	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/01/12 08:40	07/21/12 19:29	1
Benzo[g,h,i]perylene	ND		6.5	1.2	ng/L		07/01/12 08:40	07/21/12 19:29	1
Carbazole	ND		4.0	0.76	ng/L		07/01/12 08:40	07/21/12 19:29	1
Chrysene	ND		5.9	1.3	ng/L		07/01/12 08:40	07/21/12 19:29	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		07/01/12 08:40	07/21/12 19:29	1
Dibenzofuran	ND		6.0	1.0	ng/L		07/01/12 08:40	07/21/12 19:29	1
Dibenzothiophene	ND		4.3	1.0	ng/L		07/01/12 08:40	07/21/12 19:29	1
Fluoranthene	ND		4.8	1.8	ng/L		07/01/12 08:40	07/21/12 19:29	1
Fluorene	ND		4.3	0.89	ng/L		07/01/12 08:40	07/21/12 19:29	1
Indene	ND		4.9	3.4	ng/L		07/01/12 08:40	07/21/12 19:29	1
Indole	ND		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 19:29	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		07/01/12 08:40	07/21/12 19:29	1
Naphthalene	2.6	J	9.0	1.2	ng/L		07/01/12 08:40	07/21/12 19:29	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 19:29	1
Phenanthrene	ND		6.6	3.4	ng/L		07/01/12 08:40	07/21/12 19:29	1
Pyrene	ND		4.4	1.0	ng/L		07/01/12 08:40	07/21/12 19:29	1
Quinoline	ND		9.5	5.9	ng/L		07/01/12 08:40	07/21/12 19:29	1
Biphenyl	ND		5.9	1.1	ng/L		07/01/12 08:40	07/21/12 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	83		23 - 84	07/01/12 08:40	07/21/12 19:29	1
Chrysene-d12 (Surr)	43		28 - 101	07/01/12 08:40	07/21/12 19:29	1
Naphthalene-d8 (Surr)	86		22 - 97	07/01/12 08:40	07/21/12 19:29	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP6-062612

Lab Sample ID: 280-30464-4

Date Collected: 06/26/12 11:50

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.96	J	5.5	0.70	ng/L		07/01/12 08:40	07/21/12 20:04	1
2,3-Dihydroindene	58		5.1	0.72	ng/L		07/01/12 08:40	07/21/12 20:04	1
1-Methylnaphthalene	10	B	5.7	0.91	ng/L		07/01/12 08:40	07/21/12 20:04	1
2-Methylnaphthalene	9.9	B	6.0	1.0	ng/L		07/01/12 08:40	07/21/12 20:04	1
Acenaphthene	88	B	5.8	0.51	ng/L		07/01/12 08:40	07/21/12 20:04	1
Acenaphthylene	13		4.9	0.79	ng/L		07/01/12 08:40	07/21/12 20:04	1
Acridine	9.0	*	6.7	6.7	ng/L		07/01/12 08:40	07/21/12 20:04	1
Anthracene	4.0	J	4.3	0.82	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[a]anthracene	ND		4.4	0.94	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[b]fluoranthene	ND		4.8	1.4	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo(b)thiophene	12		5.3	0.77	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		07/01/12 08:40	07/21/12 20:04	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		07/01/12 08:40	07/21/12 20:04	1
Carbazole	3.0	J	3.9	0.74	ng/L		07/01/12 08:40	07/21/12 20:04	1
Chrysene	ND		5.7	1.3	ng/L		07/01/12 08:40	07/21/12 20:04	1
Dibenz(a,h)anthracene	ND		6.0	1.1	ng/L		07/01/12 08:40	07/21/12 20:04	1
Dibenzofuran	1.8	J B	5.8	1.0	ng/L		07/01/12 08:40	07/21/12 20:04	1
Dibenzothiophene	2.0	J	4.2	1.0	ng/L		07/01/12 08:40	07/21/12 20:04	1
Fluoranthene	3.3	J	4.7	1.7	ng/L		07/01/12 08:40	07/21/12 20:04	1
Fluorene	1.3	J	4.2	0.87	ng/L		07/01/12 08:40	07/21/12 20:04	1
Indene	8.3		4.8	3.4	ng/L		07/01/12 08:40	07/21/12 20:04	1
Indole	ND		4.8	1.8	ng/L		07/01/12 08:40	07/21/12 20:04	1
Indeno[1,2,3-cd]pyrene	ND		5.5	1.3	ng/L		07/01/12 08:40	07/21/12 20:04	1
Naphthalene	14		8.8	1.2	ng/L		07/01/12 08:40	07/21/12 20:04	1
Perylene	ND		3.9	3.9	ng/L		07/01/12 08:40	07/21/12 20:04	1
Phenanthrene	ND		6.5	3.3	ng/L		07/01/12 08:40	07/21/12 20:04	1
Pyrene	4.8		4.3	1.0	ng/L		07/01/12 08:40	07/21/12 20:04	1
Quinoline	ND		9.2	5.8	ng/L		07/01/12 08:40	07/21/12 20:04	1
Biphenyl	ND		5.7	1.1	ng/L		07/01/12 08:40	07/21/12 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	88	X	23 - 84	07/01/12 08:40	07/21/12 20:04	1
Chrysene-d12 (Surr)	43		28 - 101	07/01/12 08:40	07/21/12 20:04	1
Naphthalene-d8 (Surr)	85		22 - 97	07/01/12 08:40	07/21/12 20:04	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP13-062612

Lab Sample ID: 280-30464-5

Date Collected: 06/26/12 12:15

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.2	0.78	ng/L		07/01/12 08:40	07/21/12 20:40	1
2,3-Dihydroindene	2.0	J	5.8	0.81	ng/L		07/01/12 08:40	07/21/12 20:40	1
1-Methylnaphthalene	1.3	J B	6.4	1.0	ng/L		07/01/12 08:40	07/21/12 20:40	1
2-Methylnaphthalene	1.8	J B	6.8	1.1	ng/L		07/01/12 08:40	07/21/12 20:40	1
Acenaphthene	ND		6.6	0.58	ng/L		07/01/12 08:40	07/21/12 20:40	1
Acenaphthylene	ND		5.5	0.89	ng/L		07/01/12 08:40	07/21/12 20:40	1
Acridine	ND	*	7.5	7.5	ng/L		07/01/12 08:40	07/21/12 20:40	1
Anthracene	ND		4.8	0.92	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[a]anthracene	ND		5.0	1.1	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[e]pyrene	ND		5.0	1.3	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo(b)thiophene	ND		6.0	0.86	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/21/12 20:40	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/01/12 08:40	07/21/12 20:40	1
Carbazole	ND		4.4	0.83	ng/L		07/01/12 08:40	07/21/12 20:40	1
Chrysene	ND		6.4	1.4	ng/L		07/01/12 08:40	07/21/12 20:40	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		07/01/12 08:40	07/21/12 20:40	1
Dibenzofuran	ND		6.6	1.1	ng/L		07/01/12 08:40	07/21/12 20:40	1
Dibenzothiophene	ND		4.7	1.1	ng/L		07/01/12 08:40	07/21/12 20:40	1
Fluoranthene	ND		5.3	1.9	ng/L		07/01/12 08:40	07/21/12 20:40	1
Fluorene	ND		4.7	0.98	ng/L		07/01/12 08:40	07/21/12 20:40	1
Indene	ND		5.4	3.8	ng/L		07/01/12 08:40	07/21/12 20:40	1
Indole	ND		5.4	2.0	ng/L		07/01/12 08:40	07/21/12 20:40	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.5	ng/L		07/01/12 08:40	07/21/12 20:40	1
Naphthalene	6.1	J	9.9	1.3	ng/L		07/01/12 08:40	07/21/12 20:40	1
Perylene	ND		4.4	4.4	ng/L		07/01/12 08:40	07/21/12 20:40	1
Phenanthrene	ND		7.3	3.7	ng/L		07/01/12 08:40	07/21/12 20:40	1
Pyrene	ND		4.8	1.1	ng/L		07/01/12 08:40	07/21/12 20:40	1
Quinoline	ND		10	6.5	ng/L		07/01/12 08:40	07/21/12 20:40	1
Biphenyl	ND		6.4	1.2	ng/L		07/01/12 08:40	07/21/12 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	07/01/12 08:40	07/21/12 20:40	1
Chrysene-d12 (Surr)	59		28 - 101	07/01/12 08:40	07/21/12 20:40	1
Naphthalene-d8 (Surr)	81		22 - 97	07/01/12 08:40	07/21/12 20:40	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP14-062612

Lab Sample ID: 280-30464-6

Date Collected: 06/26/12 12:20

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.2	0.78	ng/L		07/01/12 08:40	07/21/12 21:16	1
2,3-Dihydroindene	2.4	J	5.7	0.80	ng/L		07/01/12 08:40	07/21/12 21:16	1
1-Methylnaphthalene	ND		6.4	1.0	ng/L		07/01/12 08:40	07/21/12 21:16	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		07/01/12 08:40	07/21/12 21:16	1
Acenaphthene	2.9	J B	6.5	0.57	ng/L		07/01/12 08:40	07/21/12 21:16	1
Acenaphthylene	1.1	J	5.5	0.88	ng/L		07/01/12 08:40	07/21/12 21:16	1
Acridine	ND	*	7.5	7.5	ng/L		07/01/12 08:40	07/21/12 21:16	1
Anthracene	ND		4.8	0.92	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo(b)thiophene	ND		6.0	0.86	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/21/12 21:16	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/01/12 08:40	07/21/12 21:16	1
Carbazole	ND		4.4	0.83	ng/L		07/01/12 08:40	07/21/12 21:16	1
Chrysene	ND		6.4	1.4	ng/L		07/01/12 08:40	07/21/12 21:16	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		07/01/12 08:40	07/21/12 21:16	1
Dibenzofuran	ND		6.5	1.1	ng/L		07/01/12 08:40	07/21/12 21:16	1
Dibenzothiophene	ND		4.7	1.1	ng/L		07/01/12 08:40	07/21/12 21:16	1
Fluoranthene	ND		5.3	1.9	ng/L		07/01/12 08:40	07/21/12 21:16	1
Fluorene	ND		4.7	0.98	ng/L		07/01/12 08:40	07/21/12 21:16	1
Indene	ND		5.4	3.8	ng/L		07/01/12 08:40	07/21/12 21:16	1
Indole	ND		5.4	2.0	ng/L		07/01/12 08:40	07/21/12 21:16	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/21/12 21:16	1
Naphthalene	2.4	J	9.9	1.3	ng/L		07/01/12 08:40	07/21/12 21:16	1
Perylene	ND		4.4	4.4	ng/L		07/01/12 08:40	07/21/12 21:16	1
Phenanthrene	ND		7.2	3.7	ng/L		07/01/12 08:40	07/21/12 21:16	1
Pyrene	1.1	J	4.8	1.1	ng/L		07/01/12 08:40	07/21/12 21:16	1
Quinoline	ND		10	6.5	ng/L		07/01/12 08:40	07/21/12 21:16	1
Biphenyl	ND		6.4	1.2	ng/L		07/01/12 08:40	07/21/12 21:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	07/01/12 08:40	07/21/12 21:16	1
Chrysene-d12 (Surr)	38		28 - 101	07/01/12 08:40	07/21/12 21:16	1
Naphthalene-d8 (Surr)	76		22 - 97	07/01/12 08:40	07/21/12 21:16	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		07/01/12 08:40	07/21/12 21:51	1
2,3-Dihydroindene	250		5.3	0.74	ng/L		07/01/12 08:40	07/21/12 21:51	1
1-Methylnaphthalene	110	B	6.0	0.95	ng/L		07/01/12 08:40	07/21/12 21:51	1
2-Methylnaphthalene	ND		6.3	1.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Acenaphthylene	75		5.1	0.82	ng/L		07/01/12 08:40	07/21/12 21:51	1
Acridine	ND	*	6.9	6.9	ng/L		07/01/12 08:40	07/21/12 21:51	1
Anthracene	5.9		4.5	0.85	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[a]anthracene	2.1	J	4.6	0.98	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo(b)thiophene	63		5.5	0.80	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[g,h,i]perylene	ND		6.6	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Carbazole	34		4.0	0.77	ng/L		07/01/12 08:40	07/21/12 21:51	1
Chrysene	ND		6.0	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenzofuran	19	B	6.1	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenzothiophene	34		4.4	1.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Fluoranthene	70		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 21:51	1
Fluorene	200		4.4	0.90	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indene	92		5.0	3.5	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indole	ND		5.0	1.8	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Naphthalene	8.0	J	9.1	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Phenanthrene	15		6.7	3.4	ng/L		07/01/12 08:40	07/21/12 21:51	1
Pyrene	90		4.5	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Quinoline	ND		9.6	6.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Biphenyl	5.3	J	6.0	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	84		23 - 84	07/01/12 08:40	07/21/12 21:51	1
Chrysene-d12 (Surr)	55		28 - 101	07/01/12 08:40	07/21/12 21:51	1
Naphthalene-d8 (Surr)	80		22 - 97	07/01/12 08:40	07/21/12 21:51	1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	730	B	24	2.1	ng/L		07/01/12 08:40	07/24/12 11:26	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	70	D	23 - 84	07/01/12 08:40	07/24/12 11:26	4
Chrysene-d12 (Surr)	41	D	28 - 101	07/01/12 08:40	07/24/12 11:26	4
Naphthalene-d8 (Surr)	78	D	22 - 97	07/01/12 08:40	07/24/12 11:26	4

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.4	J	5.6	0.71	ng/L		07/01/12 08:40	07/21/12 23:37	1
2,3-Dihydroindene	260		5.2	0.73	ng/L		07/01/12 08:40	07/21/12 23:37	1
1-Methylnaphthalene	110	B	5.8	0.92	ng/L		07/01/12 08:40	07/21/12 23:37	1
2-Methylnaphthalene	ND		6.1	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Acenaphthylene	77		5.0	0.80	ng/L		07/01/12 08:40	07/21/12 23:37	1
Acridine	ND	*	6.8	6.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Anthracene	6.3		4.4	0.83	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[a]anthracene	2.0	J	4.5	0.96	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo(b)thiophene	65		5.4	0.78	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Carbazole	33		3.9	0.75	ng/L		07/01/12 08:40	07/21/12 23:37	1
Chrysene	ND		5.8	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenzofuran	20	B	5.9	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenzothiophene	34		4.3	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Fluoranthene	69		4.8	1.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Fluorene	210		4.3	0.88	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indene	95		4.9	3.4	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indole	ND		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Naphthalene	9.5		8.9	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Phenanthrene	14		6.5	3.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Pyrene	90		4.4	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Quinoline	ND		9.4	5.9	ng/L		07/01/12 08:40	07/21/12 23:37	1
Biphenyl	5.6	J	5.8	1.1	ng/L		07/01/12 08:40	07/21/12 23:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	86	X	23 - 84	07/01/12 08:40	07/21/12 23:37	1
Chrysene-d12 (Surr)	50		28 - 101	07/01/12 08:40	07/21/12 23:37	1
Naphthalene-d8 (Surr)	82		22 - 97	07/01/12 08:40	07/21/12 23:37	1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	780	B	24	2.1	ng/L		07/01/12 08:40	07/24/12 12:02	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75	D	23 - 84	07/01/12 08:40	07/24/12 12:02	4
Chrysene-d12 (Surr)	44	D	28 - 101	07/01/12 08:40	07/24/12 12:02	4
Naphthalene-d8 (Surr)	84	D	22 - 97	07/01/12 08:40	07/24/12 12:02	4

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10FB-062612

Lab Sample ID: 280-30464-9

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.0	0.75	ng/L		07/01/12 08:40	07/22/12 00:12	1
2,3-Dihydroindene	2.7	J	5.5	0.77	ng/L		07/01/12 08:40	07/22/12 00:12	1
1-Methylnaphthalene	ND		6.2	0.99	ng/L		07/01/12 08:40	07/22/12 00:12	1
2-Methylnaphthalene	1.2	J B	6.5	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acenaphthene	ND		6.3	0.55	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acenaphthylene	ND		5.3	0.85	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acridine	ND	*	7.2	7.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Anthracene	ND		4.6	0.89	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo(b)thiophene	ND		5.8	0.83	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[g,h,i]perylene	ND		6.9	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Carbazole	ND		4.2	0.80	ng/L		07/01/12 08:40	07/22/12 00:12	1
Chrysene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenz(a,h)anthracene	ND		6.5	1.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenzofuran	ND		6.3	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenzothiophene	ND		4.5	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Fluoranthene	ND		5.1	1.9	ng/L		07/01/12 08:40	07/22/12 00:12	1
Fluorene	ND		4.5	0.94	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indene	ND		5.2	3.6	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indole	ND		5.2	1.9	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indeno[1,2,3-cd]pyrene	ND		6.0	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Naphthalene	5.3	J	9.5	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Perylene	ND		4.2	4.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Phenanthrene	ND		7.0	3.6	ng/L		07/01/12 08:40	07/22/12 00:12	1
Pyrene	ND		4.6	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Quinoline	ND		10	6.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Biphenyl	ND		6.2	1.2	ng/L		07/01/12 08:40	07/22/12 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	85	X	23 - 84	07/01/12 08:40	07/22/12 00:12	1
Chrysene-d12 (Surr)	87		28 - 101	07/01/12 08:40	07/22/12 00:12	1
Naphthalene-d8 (Surr)	85		22 - 97	07/01/12 08:40	07/22/12 00:12	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10T-062612

Lab Sample ID: 280-30464-10

Date Collected: 06/26/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.3	0.80	ng/L		07/01/12 08:40	07/22/12 00:48	1
2,3-Dihydroindene	44		5.9	0.82	ng/L		07/01/12 08:40	07/22/12 00:48	1
1-Methylnaphthalene	6.1	J B	6.6	1.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
2-Methylnaphthalene	ND		6.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acenaphthene	31	B	6.7	0.59	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acenaphthylene	1.6	J	5.6	0.90	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acridine	ND	*	7.6	7.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Anthracene	ND		4.9	0.94	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[a]anthracene	ND		5.1	1.1	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[a]pyrene	ND		2.9	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[e]pyrene	ND		5.1	1.3	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[b]fluoranthene	ND		5.5	1.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo(b)thiophene	3.8	J	6.1	0.88	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[k]fluoranthene	ND		4.8	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[g,h,i]perylene	ND		7.3	1.4	ng/L		07/01/12 08:40	07/22/12 00:48	1
Carbazole	ND		4.5	0.85	ng/L		07/01/12 08:40	07/22/12 00:48	1
Chrysene	ND		6.6	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenz(a,h)anthracene	ND		6.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenzofuran	ND		6.7	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenzothiophene	ND		4.8	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Fluoranthene	ND		5.4	2.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Fluorene	2.6	J	4.8	1.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indene	ND		5.5	3.9	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indole	ND		5.5	2.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indeno[1,2,3-cd]pyrene	ND		6.3	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Naphthalene	3.6	J	10	1.3	ng/L		07/01/12 08:40	07/22/12 00:48	1
Perylene	ND		4.5	4.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Phenanthrene	ND		7.4	3.8	ng/L		07/01/12 08:40	07/22/12 00:48	1
Pyrene	ND		4.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Quinoline	ND		11	6.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Biphenyl	ND		6.6	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	86	X	23 - 84	07/01/12 08:40	07/22/12 00:48	1
Chrysene-d12 (Surr)	50		28 - 101	07/01/12 08:40	07/22/12 00:48	1
Naphthalene-d8 (Surr)	87		22 - 97	07/01/12 08:40	07/22/12 00:48	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11

Date Collected: 06/25/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.75	ng/L		07/01/12 08:40	07/22/12 01:23	1
2,3-Dihydroindene	46		5.5	0.77	ng/L		07/01/12 08:40	07/22/12 01:23	1
1-Methylnaphthalene	6.2	B	6.2	0.98	ng/L		07/01/12 08:40	07/22/12 01:23	1
2-Methylnaphthalene	ND		6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
3-Methylcholanthrene	ND		5.5	5.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acenaphthene	32	B	6.3	0.55	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acenaphthylene	1.7	J	5.3	0.85	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acridine	ND	*	7.1	7.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Anthracene	ND		4.6	0.88	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[a]anthracene	ND		4.7	1.0	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[a]pyrene	ND		2.7	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[e]pyrene	ND		4.7	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo(b)thiophene	3.8	J	5.7	0.82	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[g,h,i]perylene	ND		6.8	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Carbazole	ND		4.2	0.79	ng/L		07/01/12 08:40	07/22/12 01:23	1
Chrysene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenz(a,h)anthracene	ND		6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenzofuran	ND		6.3	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenzothiophene	ND		4.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Fluoranthene	ND		5.1	1.9	ng/L		07/01/12 08:40	07/22/12 01:23	1
Fluorene	2.6	J	4.5	0.93	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indene	3.6	J	5.2	3.6	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indole	ND		5.2	1.9	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indeno[1,2,3-cd]pyrene	ND		5.9	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Naphthalene	3.8	J	9.5	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Perylene	ND		4.2	4.2	ng/L		07/01/12 08:40	07/22/12 01:23	1
Phenanthrene	ND		6.9	3.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Pyrene	ND		4.6	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Quinoline	ND		9.9	6.2	ng/L		07/01/12 08:40	07/22/12 01:23	1
7,12-Dimethylbenz(a)anthracene	ND		3.1	2.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Biphenyl	ND		6.2	1.2	ng/L		07/01/12 08:40	07/22/12 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	X	23 - 84	07/01/12 08:40	07/22/12 01:23	1
Chrysene-d12 (Surr)	52		28 - 101	07/01/12 08:40	07/22/12 01:23	1
Naphthalene-d8 (Surr)	88		22 - 97	07/01/12 08:40	07/22/12 01:23	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

Date Collected: 06/25/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Chlorophenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dimethylphenol	ND		9.5	0.55	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Nitrophenol	ND		19	0.37	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dichlorophenol	ND		9.5	0.61	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Chloro-3-methylphenol	ND		19	2.3	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4,6-Trichlorophenol	ND		19	0.28	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dinitrophenol	ND		57	9.5	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Nitrophenol	ND		48	1.2	ug/L		06/28/12 15:05	07/03/12 18:11	1
4,6-Dinitro-2-methylphenol	ND		57	3.8	ug/L		06/28/12 15:05	07/03/12 18:11	1
Pentachlorophenol	ND		57	19	ug/L		06/28/12 15:05	07/03/12 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	85		51 - 120	06/28/12 15:05	07/03/12 18:11	1
Phenol-d5	88		51 - 120	06/28/12 15:05	07/03/12 18:11	1
Nitrobenzene-d5	88		48 - 120	06/28/12 15:05	07/03/12 18:11	1
2-Fluorobiphenyl	73		38 - 120	06/28/12 15:05	07/03/12 18:11	1
Terphenyl-d14	98		50 - 120	06/28/12 15:05	07/03/12 18:11	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Date Collected: 06/25/12 13:45

Matrix: Water

Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.3	J	6.2	0.78	ng/L		07/01/12 08:40	07/22/12 01:58	1
2,3-Dihydroindene	280		5.7	0.80	ng/L		07/01/12 08:40	07/22/12 01:58	1
1-Methylnaphthalene	110	B	6.4	1.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acenaphthylene	50		5.5	0.88	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acridine	ND	*	7.5	7.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Anthracene	2.1	J	4.8	0.92	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo(b)thiophene	70		6.0	0.86	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Carbazole	22		4.4	0.83	ng/L		07/01/12 08:40	07/22/12 01:58	1
Chrysene	ND		6.4	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzofuran	22	B	6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzothiophene	33		4.7	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluoranthene	63		5.3	1.9	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluorene	220		4.7	0.98	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indene	69		5.4	3.8	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indole	ND		5.4	2.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Naphthalene	9.4	J	9.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Perylene	ND		4.4	4.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Phenanthrene	15		7.2	3.7	ng/L		07/01/12 08:40	07/22/12 01:58	1
Pyrene	56		4.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Quinoline	ND		10	6.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Biphenyl	6.1	J	6.4	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	91	X	23 - 84	07/01/12 08:40	07/22/12 01:58	1
Chrysene-d12 (Surr)	50		28 - 101	07/01/12 08:40	07/22/12 01:58	1
Naphthalene-d8 (Surr)	90		22 - 97	07/01/12 08:40	07/22/12 01:58	1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	700	B	26	2.3	ng/L		07/01/12 08:40	07/24/12 12:37	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	85	D	23 - 84	07/01/12 08:40	07/24/12 12:37	4
Chrysene-d12 (Surr)	42	D	28 - 101	07/01/12 08:40	07/24/12 12:37	4
Naphthalene-d8 (Surr)	97	D	22 - 97	07/01/12 08:40	07/24/12 12:37	4

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-30464-1	MTKA6-062612	87 X	52	87
280-30464-2	H6-062612	81	39	83
280-30464-3	SLP16-062612	83	43	86
280-30464-4	SLP6-062612	88 X	43	85
280-30464-5	SLP13-062612	75	59	81
280-30464-6	SLP14-062612	75	38	76
280-30464-7	SLP10-062612	84	55	80
280-30464-7 - DL	SLP10-062612	70 D	41 D	78 D
280-30464-7 MS	SLP10-062612	89 X	62	86
280-30464-7 MSD	SLP10-062612	88 X	47	85
280-30464-8	SLP10D-062612	86 X	50	82
280-30464-8 - DL	SLP10D-062612	75 D	44 D	84 D
280-30464-9	SLP10FB-062612	85 X	87	85
280-30464-10	SLP10T-062612	86 X	50	87
280-30464-11	SLP10TEXTENDED-062612	87 X	52	88
280-30464-13	SLPFEED-062612	91 X	50	90
280-30464-13 - DL	SLPFEED-062612	85 D	42 D	97 D
LCS 280-126003/2-A	Lab Control Sample	81	98	85
LCS 280-126251/2-A	Lab Control Sample	82	100	91
MB 280-126003/1-A	Method Blank	75	83	83
MB 280-126251/1-A	Method Blank	79	92	90

Surrogate Legend

FD10 = Fluorene-d10 (Surr)
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (51-120)	PHL (51-120)	NBZ (48-120)	FBP (38-120)	TBP (57-120)	TPH (50-120)
280-30464-12	SLP10TACID-062612	85	88	88	73		98
LCS 280-125974/2-A	Lab Control Sample	78	83	83	65	111	92
LCSD 280-125974/3-A	Lab Control Sample Dup	78	83	83	60	110	95
MB 280-125974/1-A	Method Blank	79	83	79	51	102	97

Surrogate Legend

2FP = 2-Fluorophenol
PHL = Phenol-d5
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TBP = 2,4,6-Tribromophenol
TPH = Terphenyl-d14

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-125974/1-A

Matrix: Water

Analysis Batch: 126613

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		10	2.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
2-Chlorophenol	ND		10	2.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/28/12 15:05	07/03/12 13:00	1
2-Nitrophenol	ND		20	0.39	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/28/12 15:05	07/03/12 13:00	1
4-Chloro-3-methylphenol	ND		20	2.4	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4,6-Trichlorophenol	ND		20	0.29	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dinitrophenol	ND		60	10	ug/L		06/28/12 15:05	07/03/12 13:00	1
4-Nitrophenol	ND		50	1.2	ug/L		06/28/12 15:05	07/03/12 13:00	1
4,6-Dinitro-2-methylphenol	ND		60	4.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
Pentachlorophenol	ND		60	20	ug/L		06/28/12 15:05	07/03/12 13:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		51 - 120	06/28/12 15:05	07/03/12 13:00	1
Phenol-d5	83		51 - 120	06/28/12 15:05	07/03/12 13:00	1
Nitrobenzene-d5	79		48 - 120	06/28/12 15:05	07/03/12 13:00	1
2-Fluorobiphenyl	51		38 - 120	06/28/12 15:05	07/03/12 13:00	1
Terphenyl-d14	97		50 - 120	06/28/12 15:05	07/03/12 13:00	1

Lab Sample ID: LCS 280-125974/2-A

Matrix: Water

Analysis Batch: 126613

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	80.0	67.4		ug/L		84	61 - 120
2-Chlorophenol	80.0	65.0		ug/L		81	58 - 120
1,4-Dichlorobenzene	80.0	40.5		ug/L		51	25 - 120
2-Methylphenol	80.0	65.4		ug/L		82	62 - 120
N-Nitrosodi-n-propylamine	80.0	69.8		ug/L		87	58 - 120
1,2,4-Trichlorobenzene	80.0	42.1		ug/L		53	28 - 120
4-Chloro-3-methylphenol	80.0	76.3		ug/L		95	69 - 120
2-Methylnaphthalene	80.0	51.0		ug/L		64	42 - 120
2,4,6-Trichlorophenol	80.0	73.0		ug/L		91	62 - 120
Acenaphthene	80.0	62.5		ug/L		78	61 - 120
4-Nitrophenol	80.0	88.3		ug/L		110	59 - 129
2,4-Dinitrotoluene	80.0	82.7		ug/L		103	76 - 120
Pentachlorophenol	80.0	75.4		ug/L		94	57 - 120
Anthracene	80.0	72.7		ug/L		91	71 - 120
Carbazole	80.0	74.7		ug/L		93	72 - 120
Pyrene	80.0	71.1		ug/L		89	71 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	78		51 - 120
Phenol-d5	83		51 - 120
Nitrobenzene-d5	83		48 - 120
2-Fluorobiphenyl	65		38 - 120
2,4,6-Tribromophenol	111		57 - 120
Terphenyl-d14	92		50 - 120

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-125974/3-A

Matrix: Water

Analysis Batch: 126613

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 125974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	80.0	66.8		ug/L		84	61 - 120	1	42
2-Chlorophenol	80.0	64.8		ug/L		81	58 - 120	0	30
1,4-Dichlorobenzene	80.0	35.8		ug/L		45	25 - 120	12	52
2-Methylphenol	80.0	65.6		ug/L		82	62 - 120	0	30
N-Nitrosodi-n-propylamine	80.0	67.5		ug/L		84	58 - 120	3	30
1,2,4-Trichlorobenzene	80.0	36.3		ug/L		45	28 - 120	15	42
4-Chloro-3-methylphenol	80.0	74.8		ug/L		93	69 - 120	2	30
2-Methylnaphthalene	80.0	41.9		ug/L		52	42 - 120	20	32
2,4,6-Trichlorophenol	80.0	70.8		ug/L		89	62 - 120	3	30
Acenaphthene	80.0	56.8		ug/L		71	61 - 120	10	30
4-Nitrophenol	80.0	87.7		ug/L		110	59 - 129	1	35
2,4-Dinitrotoluene	80.0	83.8		ug/L		105	76 - 120	1	32
Pentachlorophenol	80.0	75.8		ug/L		95	57 - 120	1	33
Anthracene	80.0	73.3		ug/L		92	71 - 120	1	30
Carbazole	80.0	76.8		ug/L		96	72 - 120	3	30
Pyrene	80.0	72.2		ug/L		90	71 - 120	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol	78		51 - 120
Phenol-d5	83		51 - 120
Nitrobenzene-d5	83		48 - 120
2-Fluorobiphenyl	60		38 - 120
2,4,6-Tribromophenol	110		57 - 120
Terphenyl-d14	95		50 - 120

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-126003/1-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		06/28/12 18:05	07/20/12 16:27	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		06/28/12 18:05	07/20/12 16:27	1
1-Methylnaphthalene	1.60	J	5.6	0.89	ng/L		06/28/12 18:05	07/20/12 16:27	1
2-Methylnaphthalene	1.94	J	5.9	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
3-Methylcholanthrene	ND		5.0	5.0	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthene	0.855	J	5.7	0.50	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthylene	ND		4.8	0.77	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acridine	ND		6.5	6.5	ng/L		06/28/12 18:05	07/20/12 16:27	1
Anthracene	2.00	J	4.2	0.80	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]anthracene	16.9		4.3	0.92	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]pyrene	12.3		2.5	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[b]fluoranthene	15.1		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[k]fluoranthene	18.8		4.1	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[g,h,i]perylene	9.38		6.2	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Carbazole	0.795	J	3.8	0.72	ng/L		06/28/12 18:05	07/20/12 16:27	1

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-126003/1-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	14.2		5.6	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenz(a,h)anthracene	11.8		5.9	1.0	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzofuran	0.994	J	5.7	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzothiophene	ND		4.1	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluoranthene	2.27	J	4.6	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluorene	ND		4.1	0.85	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indene	ND		4.7	3.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indole	ND		4.7	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indeno[1,2,3-cd]pyrene	16.1		5.4	1.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Naphthalene	1.35	J	8.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Perylene	ND		3.8	3.8	ng/L		06/28/12 18:05	07/20/12 16:27	1
Phenanthrene	ND		6.3	3.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Pyrene	2.03	J	4.2	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Quinoline	ND		9.0	5.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
7,12-Dimethylbenz(a)anthracene	ND		2.8	2.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Biphenyl	ND		5.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	06/28/12 18:05	07/20/12 16:27	1
Chrysene-d12 (Surr)	83		28 - 101	06/28/12 18:05	07/20/12 16:27	1
Naphthalene-d8 (Surr)	83		22 - 97	06/28/12 18:05	07/20/12 16:27	1

Lab Sample ID: LCS 280-126003/2-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	63.2		ng/L		84	30 - 150
2,3-Dihydroindene	75.0	57.5		ng/L		77	30 - 150
1-Methylnaphthalene	75.0	63.4		ng/L		85	30 - 150
2-Methylnaphthalene	75.0	63.4		ng/L		85	25 - 95
3-Methylcholanthrene	75.0	28.4		ng/L		38	30 - 150
Acenaphthene	75.0	65.0		ng/L		87	30 - 150
Acenaphthylene	75.0	63.4		ng/L		85	30 - 150
Acridine	75.0	ND	*	ng/L		8	30 - 150
Anthracene	75.0	63.3		ng/L		84	30 - 150
Benzo[a]anthracene	75.0	75.3		ng/L		100	30 - 150
Benzo[a]pyrene	75.0	64.9		ng/L		87	30 - 150
Benzo[e]pyrene	75.0	68.1		ng/L		91	37 - 105
Benzo[b]fluoranthene	75.0	73.4		ng/L		98	30 - 150
Benzo(b)thiophene	75.0	64.3		ng/L		86	30 - 150
Benzo[k]fluoranthene	75.0	72.6		ng/L		97	30 - 150
Benzo[g,h,i]perylene	75.0	64.3		ng/L		86	30 - 150
Carbazole	75.0	64.7		ng/L		86	30 - 150
Chrysene	75.0	74.6		ng/L		99	20 - 136
Dibenz(a,h)anthracene	75.0	66.3		ng/L		88	30 - 150
Dibenzofuran	75.0	65.0		ng/L		87	30 - 150
Dibenzothiophene	75.0	65.4		ng/L		87	30 - 150
Fluoranthene	75.0	63.8		ng/L		85	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126003/2-A

Matrix: Water

Analysis Batch: 129031

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	75.0	66.1		ng/L		88	34 - 96
Indene	75.0	60.4		ng/L		80	22 - 86
Indole	75.0	55.5		ng/L		74	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	63.5		ng/L		85	30 - 150
Naphthalene	75.0	63.9		ng/L		85	27 - 95
Perylene	75.0	64.7		ng/L		86	30 - 150
Phenanthrene	75.0	64.0		ng/L		85	30 - 150
Pyrene	75.0	58.1		ng/L		77	30 - 150
Quinoline	75.0	53.4		ng/L		71	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	41.4		ng/L		55	30 - 150
Biphenyl	75.0	63.7		ng/L		85	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	98		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Lab Sample ID: MB 280-126251/1-A

Matrix: Water

Analysis Batch: 129124

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126251

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		07/01/12 08:40	07/21/12 15:53	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		07/01/12 08:40	07/21/12 15:53	1
1-Methylnaphthalene	1.34	J	5.6	0.89	ng/L		07/01/12 08:40	07/21/12 15:53	1
2-Methylnaphthalene	1.77	J	5.9	0.98	ng/L		07/01/12 08:40	07/21/12 15:53	1
3-Methylcholanthrene	ND		5.0	5.0	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acenaphthene	0.908	J	5.7	0.50	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acenaphthylene	ND		4.8	0.77	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acridine	ND		6.5	6.5	ng/L		07/01/12 08:40	07/21/12 15:53	1
Anthracene	ND		4.2	0.80	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Carbazole	ND		3.8	0.72	ng/L		07/01/12 08:40	07/21/12 15:53	1
Chrysene	ND		5.6	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenzofuran	1.37	J	5.7	0.99	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenzothiophene	ND		4.1	0.98	ng/L		07/01/12 08:40	07/21/12 15:53	1
Fluoranthene	ND		4.6	1.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
Fluorene	ND		4.1	0.85	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indene	ND		4.7	3.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indole	ND		4.7	1.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Naphthalene	ND		8.6	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-126251/1-A

Matrix: Water

Analysis Batch: 129124

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126251

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perylene	ND		3.8	3.8	ng/L		07/01/12 08:40	07/21/12 15:53	1
Phenanthrene	ND		6.3	3.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Pyrene	ND		4.2	0.99	ng/L		07/01/12 08:40	07/21/12 15:53	1
Quinoline	ND		9.0	5.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
7,12-Dimethylbenz(a)anthracene	ND		2.8	2.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Biphenyl	ND		5.6	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	79		23 - 84	07/01/12 08:40	07/21/12 15:53	1
Chrysene-d12 (Surr)	92		28 - 101	07/01/12 08:40	07/21/12 15:53	1
Naphthalene-d8 (Surr)	90		22 - 97	07/01/12 08:40	07/21/12 15:53	1

Lab Sample ID: LCS 280-126251/2-A

Matrix: Water

Analysis Batch: 129124

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126251

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	67.2		ng/L		90	30 - 150
2,3-Dihydroindene	75.0	62.5		ng/L		83	30 - 150
1-Methylnaphthalene	75.0	67.5		ng/L		90	30 - 150
2-Methylnaphthalene	75.0	67.9		ng/L		91	25 - 95
3-Methylcholanthrene	75.0	47.2		ng/L		63	30 - 150
Acenaphthene	75.0	66.5		ng/L		89	30 - 150
Acenaphthylene	75.0	61.1		ng/L		81	30 - 150
Acridine	75.0	21.0	*	ng/L		28	30 - 150
Anthracene	75.0	60.9		ng/L		81	30 - 150
Benzo[a]anthracene	75.0	62.5		ng/L		83	30 - 150
Benzo[a]pyrene	75.0	61.5		ng/L		82	30 - 150
Benzo[e]pyrene	75.0	69.9		ng/L		93	37 - 105
Benzo[b]fluoranthene	75.0	72.3		ng/L		96	30 - 150
Benzo(b)thiophene	75.0	68.5		ng/L		91	30 - 150
Benzo[k]fluoranthene	75.0	73.8		ng/L		98	30 - 150
Benzo[g,h,i]perylene	75.0	66.3		ng/L		88	30 - 150
Carbazole	75.0	60.6		ng/L		81	30 - 150
Chrysene	75.0	78.2		ng/L		104	20 - 136
Dibenz(a,h)anthracene	75.0	69.9		ng/L		93	30 - 150
Dibenzofuran	75.0	68.3		ng/L		91	30 - 150
Dibenzothiophene	75.0	66.2		ng/L		88	30 - 150
Fluoranthene	75.0	58.1		ng/L		78	30 - 150
Fluorene	75.0	66.4		ng/L		89	34 - 96
Indene	75.0	64.4		ng/L		86	22 - 86
Indole	75.0	60.1		ng/L		80	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	63.6		ng/L		85	30 - 150
Naphthalene	75.0	68.1		ng/L		91	27 - 95
Perylene	75.0	71.4		ng/L		95	30 - 150
Phenanthrene	75.0	65.2		ng/L		87	30 - 150
Pyrene	75.0	53.2		ng/L		71	30 - 150
Quinoline	75.0	50.4		ng/L		67	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	38.8		ng/L		52	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126251/2-A

Matrix: Water

Analysis Batch: 129124

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126251

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biphenyl	75.0	66.0		ng/L		88	30 - 150
Surrogate	%Recovery	LCS Qualifier	Limits				
Fluorene-d10 (Surr)	82		23 - 84				
Chrysene-d12 (Surr)	100		28 - 101				
Naphthalene-d8 (Surr)	91		22 - 97				

Lab Sample ID: 280-30464-7 MS

Matrix: Water

Analysis Batch: 129124

Client Sample ID: SLP10-062612

Prep Type: Total/NA

Prep Batch: 126251

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.		
	Result	Qualifier	Added	Result	Qualifier				Limits		
2,3-Benzofuran	ND		78.7	67.5		ng/L		86	30 - 150		
2,3-Dihydroindene	250		78.7	330	E	ng/L		105	30 - 150		
1-Methylnaphthalene	110	B	78.7	186		ng/L		101	30 - 150		
2-Methylnaphthalene	ND		78.7	70.1		ng/L		89	25 - 95		
3-Methylcholanthrene	ND		78.7	13.7	F	ng/L		17	30 - 150		
Acenaphthene	790		78.7	900	E 4	ng/L		140	30 - 150		
Acenaphthylene	75		78.7	170		ng/L		121	30 - 150		
Acridine	ND	*	78.7	63.5		ng/L		81	30 - 150		
Anthracene	5.9		78.7	92.0		ng/L		109	30 - 150		
Benzo[a]anthracene	2.1	J	78.7	64.0		ng/L		79	30 - 150		
Benzo[a]pyrene	ND		78.7	12.1	F	ng/L		15	30 - 150		
Benzo[e]pyrene	ND		78.7	10.8	F	ng/L		14	37 - 105		
Benzo[b]fluoranthene	ND		78.7	13.0	F	ng/L		17	30 - 150		
Benzo(b)thiophene	63		78.7	136		ng/L		93	30 - 150		
Benzo[k]fluoranthene	ND		78.7	13.0	F	ng/L		16	30 - 150		
Benzo[g,h,i]perylene	ND		78.7	3.88	J F	ng/L		5	30 - 150		
Carbazole	34		78.7	125		ng/L		116	30 - 150		
Chrysene	ND		78.7	48.8		ng/L		62	20 - 136		
Dibenz(a,h)anthracene	ND		78.7	3.93	J F	ng/L		5	30 - 150		
Dibenzofuran	19	B	78.7	92.2		ng/L		92	30 - 150		
Dibenzothiophene	34		78.7	107		ng/L		93	30 - 150		
Fluoranthene	70		78.7	148		ng/L		99	30 - 150		
Fluorene	200		78.7	292	F	ng/L		112	34 - 96		
Indene	92		78.7	168	F	ng/L		96	22 - 86		
Indole	ND		78.7	65.6		ng/L		83	30 - 150		
Indeno[1,2,3-cd]pyrene	ND		78.7	4.34	J F	ng/L		6	30 - 150		
Naphthalene	8.0	J	78.7	76.9		ng/L		88	27 - 95		
Perylene	ND		78.7	11.0	F	ng/L		14	30 - 150		
Phenanthrene	15		78.7	82.7		ng/L		87	30 - 150		
Pyrene	90		78.7	163		ng/L		92	30 - 150		
Quinoline	ND		78.7	80.7		ng/L		103	20 - 112		
7,12-Dimethylbenz(a)anthracene	ND		78.7	90.2		ng/L		115	30 - 150		
Biphenyl	5.3	J	78.7	73.6		ng/L		87	30 - 150		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
Fluorene-d10 (Surr)	89	X	23 - 84								
Chrysene-d12 (Surr)	62		28 - 101								

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30464-7 MS

Matrix: Water

Analysis Batch: 129124

Client Sample ID: SLP10-062612

Prep Type: Total/NA

Prep Batch: 126251

Surrogate	MS %Recovery	MS Qualifier	Limits
Naphthalene-d8 (Surr)	86		22 - 97

Lab Sample ID: 280-30464-7 MSD

Matrix: Water

Analysis Batch: 129124

Client Sample ID: SLP10-062612

Prep Type: Total/NA

Prep Batch: 126251

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	ND		82.5	68.2		ng/L		83	30 - 150	1	50
2,3-Dihydroindene	250		82.5	332	E	ng/L		101	30 - 150	0	50
1-Methylnaphthalene	110	B	82.5	189		ng/L		100	30 - 150	2	50
2-Methylnaphthalene	ND		82.5	71.6		ng/L		87	25 - 95	2	50
3-Methylcholanthrene	ND		82.5	9.83	F	ng/L		12	30 - 150	33	50
Acenaphthene	790		82.5	916	E 4	ng/L		153	30 - 150	2	50
Acenaphthylene	75		82.5	176		ng/L		123	30 - 150	3	50
Acridine	ND	*	82.5	47.1		ng/L		57	30 - 150	30	50
Anthracene	5.9		82.5	95.4		ng/L		109	30 - 150	4	50
Benzo[a]anthracene	2.1	J	82.5	47.5		ng/L		55	30 - 150	30	50
Benzo[a]pyrene	ND		82.5	9.16	F	ng/L		11	30 - 150	28	50
Benzo[e]pyrene	ND		82.5	8.07	F	ng/L		10	37 - 105	29	50
Benzo[b]fluoranthene	ND		82.5	10.3	F	ng/L		12	30 - 150	24	50
Benzo(b)thiophene	63		82.5	140		ng/L		94	30 - 150	3	50
Benzo[k]fluoranthene	ND		82.5	9.87	F	ng/L		12	30 - 150	27	50
Benzo[g,h,i]perylene	ND		82.5	3.42	J F	ng/L		4	30 - 150	13	50
Carbazole	34		82.5	126		ng/L		112	30 - 150	1	50
Chrysene	ND		82.5	38.4		ng/L		47	20 - 136	24	50
Dibenz(a,h)anthracene	ND		82.5	3.17	J F	ng/L		4	30 - 150	21	50
Dibenzofuran	19	B	82.5	95.5		ng/L		92	30 - 150	3	50
Dibenzothiophene	34		82.5	110		ng/L		92	30 - 150	3	50
Fluoranthene	70		82.5	145		ng/L		91	30 - 150	2	50
Fluorene	200		82.5	297	F	ng/L		112	34 - 96	2	50
Indene	92		82.5	170	F	ng/L		95	22 - 86	1	50
Indole	ND		82.5	68.0		ng/L		82	30 - 150	3	50
Indeno[1,2,3-cd]pyrene	ND		82.5	3.61	J F	ng/L		4	30 - 150	18	50
Naphthalene	8.0	J	82.5	78.0		ng/L		85	27 - 95	1	50
Perylene	ND		82.5	8.50	F	ng/L		10	30 - 150	25	50
Phenanthrene	15		82.5	84.6		ng/L		85	30 - 150	2	50
Pyrene	90		82.5	159		ng/L		83	30 - 150	2	50
Quinoline	ND		82.5	82.5		ng/L		100	20 - 112	2	50
7,12-Dimethylbenz(a)anthracene	ND		82.5	80.6		ng/L		98	30 - 150	11	50
Biphenyl	5.3	J	82.5	75.8		ng/L		85	30 - 150	3	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	47		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

GC/MS Semi VOA

Prep Batch: 125974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-12	SLP10TACID-062612	Total/NA	Water	3520C	
LCS 280-125974/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-125974/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 280-125974/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 126003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-1	MTKA6-062612	Total/NA	Water	3520C	
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126003/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 126251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-2	H6-062612	Total/NA	Water	3520C	
280-30464-3	SLP16-062612	Total/NA	Water	3520C	
280-30464-4	SLP6-062612	Total/NA	Water	3520C	
280-30464-5	SLP13-062612	Total/NA	Water	3520C	
280-30464-6	SLP14-062612	Total/NA	Water	3520C	
280-30464-7	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 - DL	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 MS	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 MSD	SLP10-062612	Total/NA	Water	3520C	
280-30464-8	SLP10D-062612	Total/NA	Water	3520C	
280-30464-8 - DL	SLP10D-062612	Total/NA	Water	3520C	
280-30464-9	SLP10FB-062612	Total/NA	Water	3520C	
280-30464-10	SLP10T-062612	Total/NA	Water	3520C	
280-30464-11	SLP10EXTENDED-062612	Total/NA	Water	3520C	
280-30464-13	SLPFEED-062612	Total/NA	Water	3520C	
280-30464-13 - DL	SLPFEED-062612	Total/NA	Water	3520C	
LCS 280-126251/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126251/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 126613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-12	SLP10TACID-062612	Total/NA	Water	8270C	125974
LCS 280-125974/2-A	Lab Control Sample	Total/NA	Water	8270C	125974
LCSD 280-125974/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	125974
MB 280-125974/1-A	Method Blank	Total/NA	Water	8270C	125974

Analysis Batch: 129031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	8270C	126003
MB 280-126003/1-A	Method Blank	Total/NA	Water	8270C	126003

Analysis Batch: 129124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-1	MTKA6-062612	Total/NA	Water	8270C	126003
280-30464-2	H6-062612	Total/NA	Water	8270C	126251
280-30464-3	SLP16-062612	Total/NA	Water	8270C	126251
280-30464-4	SLP6-062612	Total/NA	Water	8270C	126251
280-30464-5	SLP13-062612	Total/NA	Water	8270C	126251
280-30464-6	SLP14-062612	Total/NA	Water	8270C	126251

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

GC/MS Semi VOA (Continued)

Analysis Batch: 129124 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-7	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-7 MS	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-7 MSD	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-8	SLP10D-062612	Total/NA	Water	8270C	126251
280-30464-9	SLP10FB-062612	Total/NA	Water	8270C	126251
280-30464-10	SLP10T-062612	Total/NA	Water	8270C	126251
280-30464-11	SLP10TEXTENDED-062612	Total/NA	Water	8270C	126251
280-30464-13	SLPFEED-062612	Total/NA	Water	8270C	126251
LCS 280-126251/2-A	Lab Control Sample	Total/NA	Water	8270C	126251
MB 280-126251/1-A	Method Blank	Total/NA	Water	8270C	126251

Analysis Batch: 129495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-7 - DL	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-8 - DL	SLP10D-062612	Total/NA	Water	8270C	126251
280-30464-13 - DL	SLPFEED-062612	Total/NA	Water	8270C	126251

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: MTKA6-062612

Date Collected: 06/26/12 09:10

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3585.3 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 18:17	KGV	TAL DEN

Client Sample ID: H6-062612

Date Collected: 06/26/12 09:55

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3812 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 18:53	KGV	TAL DEN

Client Sample ID: SLP16-062612

Date Collected: 06/26/12 11:20

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3803.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 19:29	KGV	TAL DEN

Client Sample ID: SLP6-062612

Date Collected: 06/26/12 11:50

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3903.6 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 20:04	KGV	TAL DEN

Client Sample ID: SLP13-062612

Date Collected: 06/26/12 12:15

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3473.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 20:40	KGV	TAL DEN

Client Sample ID: SLP14-062612

Date Collected: 06/26/12 12:20

Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3484.8 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 21:16	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3764.3 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 21:51	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3764.3 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 11:26	KGV	TAL DEN

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3850.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 23:37	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3850.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 12:02	KGV	TAL DEN

Client Sample ID: SLP10FB-062612

Lab Sample ID: 280-30464-9

Date Collected: 06/26/12 12:55

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3613.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 00:12	KGV	TAL DEN

Client Sample ID: SLP10T-062612

Lab Sample ID: 280-30464-10

Date Collected: 06/26/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3404.2 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 00:48	KGV	TAL DEN

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11

Date Collected: 06/25/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3638.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 01:23	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

Date Collected: 06/25/12 13:30

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1050.5 mL	1000 uL	125974	06/28/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			126613	07/03/12 18:11	MGH	TAL DEN

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Date Collected: 06/25/12 13:45

Matrix: Water

Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3484.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 01:58	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3484.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 12:37	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-12
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-31-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-12
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-12
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-12
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-12
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID

Temperature on Receipt

Drinking Water? Yes ☒ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Summit Environmental Solutions		Project Manager Bill Gregg		Date 6/25/12	Chain of Custody Number 151474
Address 1217 Bandana Blvd. N.		Telephone Number (Area Code)/Fax Number (651) 262-4236		Page 1 of 2	
City St. Paul	State MN	Zip Code 55108	Site Contact Bill Gregg	Analysis (Attach list if more space is needed)	
Project Name and Location (State) Reilly Site (MN)		Carrier/Waybill Number Fed Ex	Lab Contact	Special Instructions/ Conditions of Receipt	
Contract/Purchase Order/Quote No. 0987-0009					

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives						Sample Disposal	
			Air	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	NaOH		
MTKA6-062612	6/26/12	9:10	X										
H6-062612		9:55											
SLP16-062612		11:20											
SLP6-062612		11:50											
SLP13-062612		12:15											
SLP14-062612		12:20											
SLP10-062612		12:55											
SLP10MS-062612		12:55											
SLP10MSD-062612		12:55											
SLP10D-062612		12:55											
SLP10FB-062612		12:55											
SLP10T-062612		13:30											

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

1. Relinquished By Bill Gregg	Date 6/26/12	Time 15:00
2. Relinquished By	Date	Time
3. Relinquished By	Date	Time

Comments
 Custody Seal #s 627561 through 627570 (10 coolers)
 DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID _____
 Temperature on Receipt _____
 Drinking Water? Yes ☒ No ☐

[illegible]

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Login Number: 30464

List Source: TestAmerica Denver

List Number: 1

Creator: Paulsen, Lindsay T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1of 2x1 Liter amber bottles rec'd broken sample SPL10TACID. Suff. vol. remains
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-30464-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2103

SLP\280-30464PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for 12 aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). Eleven of the samples and the field blank were analyzed for selected ion monitoring (SIM) PAHs, and the remaining sample was analyzed for acid extractables. The data were reported by the laboratory under Job No. 280-30464-1 in a single data package. The following samples were reported:

MTKA6-062612	H6-062612	SLP16-062612
SLP6-062612	SLP13-062612	SLP14-062612
SLP10-062612	SLP10D-062612	SLP10FB-062612
SLP10T-062612	SLPFEED-062612	SLP10ACID-062612
SLP10EXTENDED-062612		

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit.
- Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612 and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater.
- Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ).

- Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects.
- The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ).

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM (PAHs) and 8270C (acid extractables). This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting sample collection dates of June 26, 2012. The samples were shipped via Federal Express and received by the laboratory on June 27, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (2.3° C to 5.1° C; criteria 4.0° C \pm 2.0° C). Samples were extracted on June 28, 2012, and July 1, 2012, within the 7-day holding time for aqueous samples. All sample extracts were analyzed on July 21 and 22, 2012, within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

SIM Analyses

The samples were analyzed on one GC/MS system, identified as "MSS_F". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided.

Acid Extractables Analyses

A summary form was provided for one decafluorotriphenylphosphine (DFTPP) instrument performance check run on instrument "MISS_Y", representing the period during which the samples and associated standards were analyzed. The performance check was fully documented and acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on July 20, 2012, for most of the target PAH compounds. For three of the target compounds, the low level standard was omitted from the IC. Documentation of all individual IC standards was provided by the

laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

One 7-point IC was performed on May 7, 2012, for acid extractable compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values for all of the target analytes were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable.

B. Continuing Calibration (CC)

One CC was performed on July 3, 2012, in support of all the acid extractable target compounds. All %D results were within the acceptance limits (35%) as defined in the QAPP.

IV. Blanks

Three laboratory method blanks and one field blank were analyzed in support of these samples. Two of the laboratory blanks (June 28 and July 1, 2012) were associated with SIM analyses, and one of the laboratory blanks was associated with the acid extractables analyses. The following target compounds were reported in the method blank associated with the preparation performed on June 28, 2012:

<u>Compound</u>	<u>Amount Reported (ng/L)</u>
1-methylnaphthalene	1.60
2-methylnaphthalene	1.94
acenaphthene	0.855
anthracene	2.00
benzo [a] anthracene	16.9
benzo [a] pyrene	12.3
benzo [b] fluoroanthene	15.1
benzo [k] fluoroanthene	18.8
benzo (g,h,i) perylene	9.38
carbazole	0.795
chrysene	14.2
dibenz (a,h,) anthracene	11.2
dibenzofuran	0.994
fluoroanthene	2.27
indeno [1,2,3-cd] pyrene	16.1
naphthalene	1.35
pyrene	2.03

The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit because the reported sample concentration was within five-times the concentration found in the method blank.

The following target compounds were reported in the method blank associated with the preparation performed on July 1, 2012:

<u>Compound</u>	<u>Amount Reported (ng/L)</u>
1-methylnaphthalene	1.34
2-methylnaphthalene	1.77
acenaphthene	0.908
dibenzofuran	1.37

Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612 and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater, because the reported sample concentration was less than five times the amount detected in the method blank.

Following qualification based on method blank contamination, 2,3-dihydroindene (2.7 ng/L) and naphthalene (5.3 ng/L) were reported in the field blank. Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to their presence in the field blank.

No acid extractable compounds were detected in the associated laboratory blank.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits with the exception of fluorene-d₁₀ in several samples with %R ranging from 85% to 91%R (criteria 23-84%). No results were qualified based on the fluorene-d₁₀ excursions since the upper limit of the acceptance criteria is low and the percent recoveries did not excessively exceed the limit.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The narrative indicated that due to breakage, MS/MSD analyses could not be performed in support of the sample submitted for acid extractables. MS/MSD analyses were performed on sample SLP11-062512 (SDG# J30428) and on sample SLP10-062612 in support of the PAH analyses. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

SPL11-062512

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Acridine	93	50	61	30-150 (25)	J/UJ
Benzo[a]pyrene	15	13		30-150 (25)	L/UJ
Benzo[e]pyrene	14	12		37-150 (25)	L/UJ
Benzo[b]fluoranthene	17	14		30-150 (25)	L/UJ
Benzo[k]fluoranthene	15	13		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	4		30-150 (25)	L/R
Dibenz[a,h]anthracene	4	3		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	5	4		30-150 (25)	L/R
Perylene	14	12	35	30-150 (25)	L/UJ

*based on amount recovered.

SLP10-062612

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
3-Methylcholanthrene	17	12	33	30-150 (25)	L/UJ
Acridine	81	57	30	30-150 (25)	J/UJ
Benzo[a]anthracene	79	55	30	30-150 (25)	J/UJ
Benzo[a]pyrene	15	11	28	30-150 (25)	L/UJ
Benzo[e]pyrene	14	10	29	37-150 (25)	L/UJ
Benzo[b]fluoranthene	17	12		30-150 (25)	L/UJ
Benzo[k]fluoranthene	16	12	27	30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	4		30-150 (25)	L/R
Dibenz[a,h]anthracene	5	4		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	4		30-150 (25)	L/R
Perylene	14	10	25	30-150 (25)	L/UJ

*based on amount recovered.

Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries. Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

Results for acridine in all samples except MTKA6-062612 were qualified as estimated (L, UJ) due to the unacceptable RPD value. The result for acridine in

MTKA6-062612 warranted qualification on this basis but was subsequently rejected (R) due to the LCS results and the “R” qualifier takes precedence.

B. Laboratory Control Samples (LCS)

Results for two LCS in support of the PAH analyses and one LCS/LCSD pair in support of the acid extractables were provided in the data package. All recoveries were acceptable with the exception of acridine in each of the PAH LCS. Acridine was reported as not detected in the LCS associated with MTKA6-062612, and in the LCS associated with all other samples, acridine had a 28%R. The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ) due to unacceptable LCS recovery.

VII. Field Duplicate

Sample SLP10D-062612 was collected as a field duplicate of sample SLP10-062612. Percent difference values between paired results were acceptable except for 2,3-dibenzofuran, which was detected (1.4 ng/L) in SLP10D-062612, but was not detected in SLP10-062612. The result for 2,3-dibenzofuran in SLP10D-062612 was qualified as not detected (U) at the analyte-specific RL on this basis.

No field duplicate was submitted in support of the acid extractables sample.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Ion chromatograms were not provided for any of the compounds reported in these samples. The data validation was completed on the assumption that all of the ratios for the paired ions were acceptable.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limits for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene. The reporting limits were equivalent to the concentration of the lowest calibration standard from the IC. However, the laboratory eliminated the low level standard from the IC for the analytes noted above but did not adjust the reporting limit on the organic analysis report sheets. The actual reporting limit was calculated by the validator and replaced on the report sheets. The laboratory appropriately applied “J” qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution the factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- The RLs for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene were reported incorrectly (section X).
- An 8%R in one of the LCS analyses was reported for acridine; however, the laboratory reported the compound as not detected.
- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have “System Verification for Instrument #1” in the footer with no link to an instrument. The

laboratory was contacted and stated, “The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages”.

- No ratios or spectra were included in the data package to support the identification of the reported compounds. The validation was completed on the assumption that all of the ion ratios for the reported compounds were acceptable.

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit because the sample concentration detected was within five-times the concentration found in the method blank.
- Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612, SLP10FB-062612, and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater, due to method blank contamination.
- Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to their presence in the field blank.
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries.

- Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects due to unacceptable MS/MSD recoveries.
- Results for acridine in all samples except MTKA6-062612 were qualified as estimated (L, UJ) due to the unacceptable RPD value between paired spike results.
- The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ) due to unacceptable LCS recoveries.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ATTACHMENT A

**DATA SUMMARY FORMS
Laboratory Job No. 280-30464
PAHs in Water**

[illegible]

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25 and 26, 2012

Job No. 280-30464-1

ddms Project No. 2006-0022

Sample Location		SLP10-062612	SLP10D-062612	SLP10FB-062612	SLP10T-062612	SLP10EXTENDED-062612	SLPFEED-062612
Lab Sample ID		280-30464-7	280-30464-8FD	280-30464-9FB	280-30464-10	280-30464-11	280-30464-13
Initial Volume		3764.3	3850.1	3803.4	3404.2	3638.4	3484.82.4
Dilution Factor		1.06, 4.2	1.03, 4.1	1.05	1.18	1.10	1.15, 4.6
RL							
5.4	2,3-Benzofuran			U			1.3 J
5.0	2,3-Dihydroindene	250	260	27 J	44	46	280
5.6	1-Methylnaphthalene	110	110		6.1 U	6.2 U	110
5.9	2-Methylnaphthalene			U			
5.0	3-Methylcholanthrene	NA	NA	NA	NA	R	NA
5.7	Acenaphthene	730	780		31	32	700
4.8	Acenaphthylene	75	77		1.6 J	1.7 J	50
6.5	Acridine	UJ	UJ	UJ	UJ	UJ	UJ
4.2	Anthracene	5.9	6.3				2.1 J
4.3	Benzo[a]anthracene	2.1 J	2.0 J				
2.5	Benzo[a]pyrene	UJ	UJ	UJ	UJ	UJ	UJ
4.3	Benzo[e]pyrene	UJ	UJ	UJ	UJ	UJ	UJ
4.7	Benzo[b]fluoranthene	UJ	UJ	UJ	UJ	UJ	UJ
5.2	Benzo(b)thiophene	63	65		3.8 J	3.8 J	70
4.1	Benzo[k]fluoranthene	UJ	UJ	UJ	UJ	UJ	UJ
6.2	Benzo[g,h,i]perylene	R	R	R	R	R	R
3.8	Carbazole	34	33				22
5.6	Chrysene						
5.9	Dibenz(a,h)anthracene	R	R	R	R	R	R
5.7	Dibenzofuran	19	20				22
4.1	Dibenzothiophene	34	34				33
4.6	Fluoranthene	70	69				63
4.1	Fluorene	200	210		2.6 J	2.6 J	220
4.7	Indene	92	95			3.6 J	69
4.7	Indole						
5.4	Indeno[1,2,3-cd]pyrene	R	R	R	R	R	R
8.6	Naphthalene	U	9.5 U	5.3 J	U	U	9.4 U
3.8	Perylene	UJ	UJ	UJ	UJ	UJ	UJ
6.3	Phenanthrene	15	14				15
4.2	Pyrene	90	90				56
9.0	Quinoline						
2.8	7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA		NA
5.6	Biphenyl	5.3 J	5.6 J				6.1 J

DATA SUMMARY FORM: SEMIVOLATILES (Acids)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25 and 26, 2012

Job No. 280-30464-1

ddms Project No. 2006-0022

[illegible]

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS

Laboratory Job No. 280-30464

PAHs in Water

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP16-062612

Lab Sample ID: 280-30464-3

Date Sampled: 06/26/2012 1120

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5293.D
Dilution:	1.0			Initial Weight/Volume:	3803.4 mL
Analysis Date:	07/21/2012 1929			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	0.95	J U	0.74	5.3
1-Methylnaphthalene	ND		0.94	5.9
2-Methylnaphthalene	ND		1.0	6.2
Acenaphthene	ND		0.53	6.0
Acenaphthylene	ND		0.81	5.0
Acridine	ND	* US	6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND		0.97	4.5
Benzo[a]pyrene	ND	US	1.3	2.6
Benzo[e]pyrene	ND		1.2	4.5
Benzo[b]fluoranthene	ND	I	1.5	4.9
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	ND	US	1.3	4.3
Benzo[g,h,i]perylene	R-ND		1.2	6.5
Carbazole	ND		0.76	4.0
Chrysene	ND		1.3	5.9
Dibenz(a,h)anthracene	R-ND		1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R-ND		1.3	5.7
Naphthalene	2.6	J U	1.2	9.0
Perylene	ND	US	4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	ND		1.0	4.4
Quinoline	ND		5.9	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	86		22 - 97

Doyle S Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: MTKA6-062612

Lab Sample ID: 280-30464-1

Date Sampled: 06/26/2012 0910

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5291.D
Dilution:	1.0			Initial Weight/Volume:	3585.3 mL
Analysis Date:	07/21/2012 1817			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.76	6.0
2,3-Dihydroindene	4.7	+ U	0.78	5.6
1-Methylnaphthalene	ND		0.99	6.2
2-Methylnaphthalene	ND		1.1	6.6
Acenaphthene	ND		0.56	6.4
Acenaphthylene	ND		0.86	5.4
Acridine	ND	*	7.3	7.3
Anthracene	ND		0.89	4.7
Benzo[a]anthracene	ND		1.0	4.8
Benzo[a]pyrene	ND	US	1.4	2.8
Benzo[e]pyrene	ND	I	1.3	4.8
Benzo[b]fluoranthene	ND		1.6	5.2
Benzo(b)thiophene	ND		0.84	5.8
Benzo[k]fluoranthene	ND	US	1.4	4.6
Benzo[g,h,i]perylene	ND		1.3	6.9
Carbazole	ND		0.80	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	ND		1.2	6.6
Dibenzofuran	ND		1.1	6.4
Dibenzothiophene	ND		1.1	4.6
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.95	4.6
Indene	ND		3.7	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	ND		1.4	6.0
Naphthalene	4.4	JB US US	1.3	9.6
Perylene	ND	US	4.3	4.3
Phenanthrene	ND		3.6	7.0
Pyrene	ND		1.1	4.7
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	52		28 - 101
Naphthalene-d8 (Surr)	87		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: H6-062612

Lab Sample ID: 280-30464-2

Client Matrix: Water

Date Sampled: 06/26/2012 0955

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5292.D
Dilution:	1.0			Initial Weight/Volume:	3812 mL
Analysis Date:	07/21/2012 1853			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.7
2,3-Dihydroindene	1.9	J	0.73	5.2
1-Methylnaphthalene	4.0	JB	0.93	5.9
2-Methylnaphthalene	1.1	JB	1.0	6.2
Acenaphthene	28	B	0.52	6.0
Acenaphthylene	4.1	J	0.81	5.0
Acridine	ND	US	6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND		0.97	4.5
Benzo[a]pyrene	ND	US	1.3	2.6
Benzo[e]pyrene	ND		1.2	4.5
Benzo[b]fluoranthene	ND		1.5	4.9
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	ND	US	1.3	4.3
Benzo[g,h,i]perylene	ND		1.2	6.5
Carbazole	ND		0.76	4.0
Chrysene	ND		1.3	5.9
Dibenz(a,h)anthracene	ND		1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	2.3	J	1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	1.2	J	0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND		1.3	5.7
Naphthalene	4.4	J	1.2	9.0
Perylene	ND	US	4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	2.2	J	1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	39		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

Only J. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP6-062612

Lab Sample ID: 280-30464-4

Client Matrix: Water

Date Sampled: 06/26/2012 1150

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5294.D
Dilution:	1.0			Initial Weight/Volume:	3903.6 mL
Analysis Date:	07/21/2012 2004			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.96	J	0.70	5.5
2,3-Dihydroindene	58		0.72	5.1
1-Methylnaphthalene	10	B	0.91	5.7
2-Methylnaphthalene	9.9	B	1.0	6.0
Acenaphthene	88	B	0.51	5.8
Acenaphthylene	13		0.79	4.9
Acridine	9.0	L	6.7	6.7
Anthracene	4.0	J	0.82	4.3
Benzo[a]anthracene	ND		0.94	4.4
Benzo[a]pyrene	ND	US	1.3	2.6
Benzo[e]pyrene	ND	I	1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.8
Benzo(b)thiophene	12		0.77	5.3
Benzo[k]fluoranthene	ND	US	1.3	4.2
Benzo[g,h,i]perylene	R ND		1.2	6.4
Carbazole	3.0	J	0.74	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	R ND		1.1	6.0
Dibenzofuran	1.8	JB U	1.0	5.8
Dibenzothiophene	2.0	J	1.0	4.2
Fluoranthene	3.3	J	1.7	4.7
Fluorene	1.3	J	0.87	4.2
Indene	8.3		3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.5
Naphthalene	14	U	1.2	8.8
Perylene	ND	US	3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	4.8		1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP13-062612

Lab Sample ID: 280-30464-5

Date Sampled: 06/26/2012 1215

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5295.D
Dilution:	1.0			Initial Weight/Volume:	3473.1 mL
Analysis Date:	07/21/2012 2040			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	2.0	J U	0.81	5.8
1-Methylnaphthalene	1.3	JB	1.0	6.4
2-Methylnaphthalene	1.8	JB	1.1	6.8
Acenaphthene	ND		0.58	6.6
Acenaphthylene	ND		0.89	5.5
Acridine	ND	US	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	5.0
Benzo[a]pyrene	ND	US	1.4	2.9
Benzo[e]pyrene	ND	I	1.3	5.0
Benzo[b]fluoranthene	ND	I	1.6	5.4
Benzo(b)thiophene	ND		0.86	6.0
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	ND		1.3	7.1
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	ND		1.2	6.8
Dibenzofuran	ND		1.1	6.6
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	ND		1.5	6.2
Naphthalene	6.1	J U	1.3	9.9
Perylene	ND	US	4.4	4.4
Phenanthrene	ND		3.7	7.3
Pyrene	ND		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	59		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

Colly J. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP14-062612

Lab Sample ID: 280-30464-6

Date Sampled: 06/26/2012 1220

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5296.D
Dilution:	1.0			Initial Weight/Volume:	3484.8 mL
Analysis Date:	07/21/2012 2116			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	2.4	J	0.80	5.7
1-Methylnaphthalene	ND		1.0	6.4
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthene	2.0	JB U	0.57	6.5
Acenaphthylene	1.1	J	0.88	5.5
Acridine	ND	U US	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	ND	US	1.4	2.9
Benzo[e]pyrene	ND	I	1.3	4.9
Benzo[b]fluoranthene	ND		1.6	5.4
Benzo(b)thiophene	ND		0.86	6.0
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	R ND		1.3	7.1
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	R ND		1.2	6.8
Dibenzofuran	ND		1.1	6.5
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ND		1.4	6.2
Naphthalene	2.4	U US	1.3	9.9
Perylene	ND	US	4.4	4.4
Phenanthrene	ND		3.7	7.2
Pyrene	1.1	J	1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	38		28 - 101
Naphthalene-d8 (Surr)	76		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Client Matrix: Water

Date Sampled: 06/26/2012 1255

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5297.D
Dilution:	1.0			Initial Weight/Volume:	3764.3 mL
Analysis Date:	07/21/2012 2151			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	250		0.74	5.3
1-Methylnaphthalene	110	B	0.95	6.0
2-Methylnaphthalene	ND		1.0	6.3
Acenaphthylene	75		0.82	5.1
Acridine	ND	US	6.9	6.9
Anthracene	5.9		0.85	4.5
Benzo[a]anthracene	2.1	J	0.98	4.6
Benzo[a]pyrene	ND	US	1.3	2.7
Benzo[e]pyrene	ND	I	1.2	4.6
Benzo[b]fluoranthene	ND		1.5	5.0
Benzo(b)thiophene	63		0.80	5.5
Benzo[k]fluoranthene	ND	US	1.3	4.4
Benzo[g,h,i]perylene	R ND		1.2	6.6
Carbazole	34		0.77	4.0
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	R ND		1.1	6.3
Dibenzofuran	19	B	1.1	6.1
Dibenzothiophene	34		1.0	4.4
Fluoranthene	70		1.8	4.9
Fluorene	200		0.90	4.4
Indene	92		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.7
Naphthalene	8.0	J U	1.2	9.1
Perylene	ND	US	4.0	4.0
Phenanthrene	15		3.4	6.7
Pyrene	90		1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	5.3	J	1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	55		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Date Sampled: 06/26/2012 1255

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5312.D
Dilution:	4.0			Initial Weight/Volume:	3764.3 mL
Analysis Date:	07/24/2012 1126	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	730	B	2.1	24

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	70	D	23 - 84
Chrysene-d12 (Surr)	41	D	28 - 101
Naphthalene-d8 (Surr)	78	D	22 - 97

Polly S. Newbold
2/26/2012

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8FD

Client Matrix: Water

Date Sampled: 06/26/2012 1255

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5300.D
Dilution:	1.0			Initial Weight/Volume:	3850.1 mL
Analysis Date:	07/21/2012 2337			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.4	J U	0.71	5.6
2,3-Dihydroindene	260		0.73	5.2
1-Methylnaphthalene	110	B	0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthylene	77		0.80	5.0
Acridine	ND	U S	6.8	6.8
Anthracene	6.3		0.83	4.4
Benzo[a]anthracene	2.0	J	0.96	4.5
Benzo[a]pyrene	ND	U S	1.3	2.6
Benzo[e]pyrene	ND		1.2	4.5
Benzo[b]fluoranthene	ND	I	1.4	4.9
Benzo(b)thiophene	65		0.78	5.4
Benzo[k]fluoranthene	ND	U S	1.3	4.3
Benzo[g,h,i]perylene	ND		1.2	6.4
Carbazole	33		0.75	3.9
Chrysene	ND		1.3	5.8
Dibenz(a,h)anthracene	ND		1.1	6.1
Dibenzofuran	20	B	1.0	5.9
Dibenzothiophene	34		1.0	4.3
Fluoranthene	69		1.8	4.8
Fluorene	210		0.88	4.3
Indene	95		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND		1.3	5.6
Naphthalene	9.5	U S	1.2	8.9
Perylene	ND	U S	4.0	4.0
Phenanthrene	14		3.3	6.5
Pyrene	90		1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	5.6	J	1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	82		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8FD

Client Matrix: Water

Date Sampled: 06/26/2012 1255

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5313.D
Dilution:	4.0			Initial Weight/Volume:	3850.1 mL
Analysis Date:	07/24/2012 1202	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	780	B	2.1	24

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75	D	23 - 84
Chrysene-d12 (Surr)	44	D	28 - 101
Naphthalene-d8 (Surr)	84	D	22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10FB-062612

Lab Sample ID: 280-30464-9FB

Client Matrix: Water

Date Sampled: 06/26/2012 1255

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5301.D
Dilution:	1.0			Initial Weight/Volume:	3613.4 mL
Analysis Date:	07/22/2012 0012			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.75	6.0
2,3-Dihydroindene	2.7	J	0.77	5.5
1-Methylnaphthalene	ND		0.99	6.2
2-Methylnaphthalene	1.2	JB U	1.1	6.5
Acenaphthene	ND		0.55	6.3
Acenaphthylene	ND		0.85	5.3
Acridine	ND	+ U5	7.2	7.2
Anthracene	ND		0.89	4.6
Benzo[a]anthracene	ND		1.0	4.8
Benzo[a]pyrene	ND	U5	1.4	2.8
Benzo[e]pyrene	ND	U5	1.3	4.8
Benzo[b]fluoranthene	ND	I	1.5	5.2
Benzo(b)thiophene	ND		0.83	5.8
Benzo[k]fluoranthene	ND	U5	1.4	4.5
Benzo[g,h,i]perylene	ND		1.3	6.9
Carbazole	ND		0.80	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	ND		1.2	6.5
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.94	4.5
Indene	ND		3.6	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	ND		1.4	6.0
Naphthalene	5.3	J	1.3	9.5
Perylene	ND	U5	4.2	4.2
Phenanthrene	ND		3.6	7.0
Pyrene	ND		1.1	4.6
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	85	X	23 - 84
Chrysene-d12 (Surr)	87		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Only S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10T-062612

Lab Sample ID: 280-30464-10

Date Sampled: 06/26/2012 1330

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5302.D
Dilution:	1.0			Initial Weight/Volume:	3404.2 mL
Analysis Date:	07/22/2012 0048			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.80	6.3
2,3-Dihydroindene	44		0.82	5.9
1-Methylnaphthalene	6.1	JB 4	1.0	6.6
2-Methylnaphthalene	ND		1.2	6.9
Acenaphthene	31	B	0.59	6.7
Acenaphthylene	1.6	J	0.90	5.6
Acridine	ND	US	7.6	7.6
Anthracene	ND		0.94	4.9
Benzo[a]anthracene	ND		1.1	5.1
Benzo[a]pyrene	ND	US	1.5	2.9
Benzo[e]pyrene	ND	I	1.3	5.1
Benzo[b]fluoranthene	ND		1.6	5.5
Benzo(b)thiophene	3.8	J	0.88	6.1
Benzo[k]fluoranthene	ND	US	1.5	4.8
Benzo[g,h,i]perylene	R ND		1.4	7.3
Carbazole	ND		0.85	4.5
Chrysene	ND		1.5	6.6
Dibenz(a,h)anthracene	R ND		1.2	6.9
Dibenzofuran	ND		1.2	6.7
Dibenzothiophene	ND		1.2	4.8
Fluoranthene	ND		2.0	5.4
Fluorene	2.6	J	1.0	4.8
Indene	ND		3.9	5.5
Indole	ND		2.0	5.5
Indeno[1,2,3-cd]pyrene	R ND		1.5	6.3
Naphthalene	2.6	US	1.3	10
Perylene	ND	US	4.5	4.5
Phenanthrene	ND		3.8	7.4
Pyrene	ND		1.2	4.9
Quinoline	ND		6.6	11
Biphenyl	ND		1.2	6.6
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	86	X	23 - 84	
Chrysene-d12 (Surr)	50		28 - 101	
Naphthalene-d8 (Surr)	87		22 - 97	

Polys. Newbold
2/20/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11

Date Sampled: 06/25/2012 1330

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5303.D
Dilution:	1.0			Initial Weight/Volume:	3638.4 mL
Analysis Date:	07/22/2012 0123			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.75	5.9
2,3-Dihydroindene	46		0.77	5.5
1-Methylnaphthalene	6.2	B U	0.98	6.2
2-Methylnaphthalene	ND		1.1	6.5
3-Methylcholanthrene	R ND		5.5	5.5
Acenaphthene	32	B	0.55	6.3
Acenaphthylene	1.7	J	0.85	5.3
Acridine	ND	U S	7.1	7.1
Anthracene	ND		0.88	4.6
Benzo[a]anthracene	ND		1.0	4.7
Benzo[a]pyrene	ND	U S	1.4	2.7
Benzo[e]pyrene	ND	I	1.3	4.7
Benzo[b]fluoranthene	ND	J	1.5	5.2
Benzo(b)thiophene	3.8	J	0.82	5.7
Benzo[k]fluoranthene	ND	U S	1.4	4.5
Benzo[g,h,i]perylene	R ND		1.3	6.8
Carbazole	ND		0.79	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	R ND		1.1	6.5
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	2.6	J	0.93	4.5
Indene	3.6	J	3.6	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	R ND		1.4	5.9
Naphthalene	3.8	U S	1.3	9.5
Perylene	ND	U S	4.2	4.2
Phenanthrene	ND		3.5	6.9
Pyrene	ND		1.1	4.6
Quinoline	ND		6.2	9.9
7,12-Dimethylbenz(a)anthracene	ND		2.5	3.1
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	52		28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Date Sampled: 06/25/2012 1345

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5304.D
Dilution:	1.0			Initial Weight/Volume:	3484.1 mL
Analysis Date:	07/22/2012 0158			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.3	J	0.78	6.2
2,3-Dihydroindene	280		0.80	5.7
1-Methylnaphthalene	110	B	1.0	6.4
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthylene	50		0.88	5.5
Acridine	ND	US	7.5	7.5
Anthracene	2.1	J	0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	ND	US	1.4	2.9
Benzo[e]pyrene	ND	L	1.3	4.9
Benzo[b]fluoranthene	ND		1.6	5.4
Benzo(b)thiophene	70		0.86	6.0
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	R ND		1.3	7.1
Carbazole	22		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	R ND		1.2	6.8
Dibenzofuran	22	B	1.1	6.5
Dibenzothiophene	33		1.1	4.7
Fluoranthene	63		1.9	5.3
Fluorene	220		0.98	4.7
Indene	69		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ND		1.4	6.2
Naphthalene	9.4	US	1.3	9.9
Perylene	ND	US	4.4	4.4
Phenanthrene	15		3.7	7.2
Pyrene	56		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	6.1	J	1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	91	X	23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	90		22 - 97

Polly L. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Date Sampled: 06/25/2012 1345

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5314.D
Dilution:	4.0			Initial Weight/Volume:	3484.1 mL
Analysis Date:	07/24/2012 1237	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	700	B	2.3	26

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	85	D	23 - 84
Chrysene-d12 (Surr)	42	D	28 - 101
Naphthalene-d8 (Surr)	97	D	22 - 97

Golly S. Newbold
2/20/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

Date Sampled: 06/25/2012 1330

Client Matrix: Water

Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-126613	Instrument ID:	MSS_Y
Prep Method:	3520C	Prep Batch:	280-125974	Lab File ID:	Y8610.D
Dilution:	1.0			Initial Weight/Volume:	1050.5 mL
Analysis Date:	07/03/2012 1811			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1505			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		1.9	9.5
2-Chlorophenol	ND		1.9	9.5
2,4-Dimethylphenol	ND		0.55	9.5
2-Nitrophenol	ND		0.37	19
2,4-Dichlorophenol	ND		0.61	9.5
4-Chloro-3-methylphenol	ND		2.3	19
2,4,6-Trichlorophenol	ND		0.28	19
2,4-Dinitrophenol	ND		9.5	57
4-Nitrophenol	ND		1.2	48
4,6-Dinitro-2-methylphenol	ND		3.8	57
Pentachlorophenol	ND		19	57

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	85		51 - 120
Phenol-d5	88		51 - 120
Nitrobenzene-d5	88		48 - 120
2-Fluorobiphenyl	73		38 - 120
Terphenyl-d14	98		50 - 120

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-30514-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

1217 Bandana Blvd North

Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

7/30/2012 11:32:12 AM

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Project Manager II

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Job ID: 280-30514-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-30514-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Eight samples were received under chain of custody on June 28, 2012. The samples were received at temperatures of 2.8°C, 2.9°C, 3.1°C, 2.2°C and 2.9°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

W406 (280-30514-1) had an initial volume of 3500 mL
W401 (280-30514-2) had an initial volume of 3866.2 mL
W29 (280-30514-3) had an initial volume of 3873.3 mL
W48 (280-30514-4) had an initial volume of 3999.8 mL
W119 (280-30514-5) had an initial volume of 3642.5 mL
W119D (280-30514-6) had an initial volume of 3835.1 mL
W119FB (280-30514-7) had an initial volume of 3731.3 mL
W403 (280-30514-8) had an initial volume of 3831 mL

The surrogates listed below were recovered outside the QC control limits in the following samples, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

W29 (280-30514-3) recovered Fluorene-d10 at 85% (limits 23-84%)
W48 (280-30514-4) recovered Chrysene-d12 at 9% (limits 28-101%)
W119D (280-30514-6) recovered Fluorene-d10 at 9% (limits 23-84%)
W119D (280-30514-6) recovered Naphthalene-d8 at 0.7% (limits 22-97%)
W403 (280-30514-8) recovered Chrysene-d12 at 13% (limits 28-101%)

Low levels of 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene and Dibenzofuran are present in the method blank associated with prep batch 280-126528. The values should be considered estimates, and have been flagged "J". Because the

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Job ID: 280-30514-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

The LCS associated with prep batch 280-126528 exhibited percent recoveries below the QC control limits for Acridine at 12% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 18% (limits 30-150%). 7,12-Dimethylbenz(a)anthracene is not a compound of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "B".

The MS/MSD associated with prep batch 280-126528 was performed using sample W 119 (280-30514-5), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits and 1 of the three surrogate recoveries outside the QC control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indeno[1,2,3-cd]pyrene	Perylene
Fluorene-d10		

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-30514-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	29
Sample Surrogates	24	19
Samples and QC Internal Standard Area	36	36
TOTAL	193	183
% Completeness	94.8%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-30514-1					
Sample: W119		DUP: W119D			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	21	Acenaphthene	0.89	183.7	p
Acenaphthylene	2.5	Acenaphthylene	ND	NC	
Acridine	ND	Acridine	ND	0.0	
Anthracene	3.9	Anthracene	2.3	51.6	p
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	5.4	Benzo(b)thiophene	ND	NC	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	1.6	Carbazole	1.1	37.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	4.3	2,3-Dihydroindene	ND	NC	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	2.4	Indole	ND	NC	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	1.0	1-Methylnaphthalene	ND	NC	
Naphthalene	4.1	Naphthalene	ND	NC	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	11	Pyrene	7.0	44.4	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W406

Lab Sample ID: 280-30514-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	2.6	J	9.8	1.3	ng/L	1		8270C	Total/NA
Pyrene	8.3		4.8	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: W401

Lab Sample ID: 280-30514-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	3.2	J B	5.9	0.52	ng/L	1		8270C	Total/NA
Naphthalene	2.8	J	8.9	1.2	ng/L	1		8270C	Total/NA
Pyrene	3.2	J	4.3	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: W29

Lab Sample ID: 280-30514-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	0.76	J	5.6	0.70	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	5.3		5.2	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	6.8	B	5.8	0.92	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	7.5	B	6.1	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	13	B	5.9	0.52	ng/L	1		8270C	Total/NA
Acenaphthylene	2.0	J	5.0	0.80	ng/L	1		8270C	Total/NA
Anthracene	3.8	J	4.3	0.83	ng/L	1		8270C	Total/NA
Benzo[a]anthracene	1.2	J	4.4	0.95	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	1.4	J	5.4	0.77	ng/L	1		8270C	Total/NA
Dibenzofuran	3.3	J B	5.9	1.0	ng/L	1		8270C	Total/NA
Dibenzothiophene	3.0	J	4.2	1.0	ng/L	1		8270C	Total/NA
Fluoranthene	21		4.8	1.7	ng/L	1		8270C	Total/NA
Fluorene	14		4.2	0.88	ng/L	1		8270C	Total/NA
Naphthalene	17		8.9	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	7.6		6.5	3.3	ng/L	1		8270C	Total/NA
Pyrene	17		4.3	1.0	ng/L	1		8270C	Total/NA
Biphenyl	2.7	J	5.8	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: W48

Lab Sample ID: 280-30514-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	0.84	J	5.4	0.68	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	3.9	J	5.0	0.70	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	2.2	J B	5.6	0.89	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.8	J B	5.9	0.98	ng/L	1		8270C	Total/NA
Acenaphthene	60	B	5.7	0.50	ng/L	1		8270C	Total/NA
Anthracene	3.2	J	4.2	0.80	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	6.9		5.2	0.75	ng/L	1		8270C	Total/NA
Carbazole	0.90	J	3.8	0.72	ng/L	1		8270C	Total/NA
Indene	24		4.7	3.3	ng/L	1		8270C	Total/NA
Naphthalene	5.5	J	8.6	1.1	ng/L	1		8270C	Total/NA
Pyrene	1.2	J	4.2	0.99	ng/L	1		8270C	Total/NA

Client Sample ID: W119

Lab Sample ID: 280-30514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	4.3	J	5.5	0.77	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.0	J B	6.1	0.98	ng/L	1		8270C	Total/NA
Acenaphthene	21	B	6.3	0.55	ng/L	1		8270C	Total/NA
Acenaphthylene	2.5	J	5.3	0.85	ng/L	1		8270C	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W119 (Continued)

Lab Sample ID: 280-30514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Anthracene	3.9	J	4.6	0.88	ng/L			1	8270C	Total/NA
Benzo(b)thiophene	5.4	J	5.7	0.82	ng/L			1	8270C	Total/NA
Carbazole	1.6	J	4.2	0.79	ng/L			1	8270C	Total/NA
Indene	10		5.2	3.6	ng/L			1	8270C	Total/NA
Indole	2.4	J	5.2	1.9	ng/L			1	8270C	Total/NA
Naphthalene	4.1	J	9.4	1.3	ng/L			1	8270C	Total/NA
Pyrene	11		4.6	1.1	ng/L			1	8270C	Total/NA

Client Sample ID: W119D

Lab Sample ID: 280-30514-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.89	J B	5.9	0.52	ng/L			1	8270C	Total/NA
Anthracene	2.3	J	4.4	0.83	ng/L			1	8270C	Total/NA
Carbazole	1.1	J	4.0	0.75	ng/L			1	8270C	Total/NA
Pyrene	7.0		4.4	1.0	ng/L			1	8270C	Total/NA

Client Sample ID: W119FB

Lab Sample ID: 280-30514-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Naphthalene	4.9	J	9.2	1.2	ng/L			1	8270C	Total/NA

Client Sample ID: W403

Lab Sample ID: 280-30514-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	4.7	J	5.2	0.73	ng/L			1	8270C	Total/NA
1-Methylnaphthalene	3.2	J B	5.8	0.93	ng/L			1	8270C	Total/NA
2-Methylnaphthalene	6.8	B	6.2	1.0	ng/L			1	8270C	Total/NA
Acenaphthene	0.78	J B	6.0	0.52	ng/L			1	8270C	Total/NA
Acenaphthylene	5.1		5.0	0.80	ng/L			1	8270C	Total/NA
Anthracene	4.9		4.4	0.84	ng/L			1	8270C	Total/NA
Benzo[a]anthracene	29		4.5	0.96	ng/L			1	8270C	Total/NA
Benzo[a]pyrene	26		2.6	1.3	ng/L			1	8270C	Total/NA
Benzo[e]pyrene	19		4.5	1.2	ng/L			1	8270C	Total/NA
Benzo[b]fluoranthene	46		4.9	1.5	ng/L			1	8270C	Total/NA
Benzo[g,h,i]perylene	16		6.5	1.2	ng/L			1	8270C	Total/NA
Carbazole	2.0	J	4.0	0.75	ng/L			1	8270C	Total/NA
Chrysene	29		5.8	1.3	ng/L			1	8270C	Total/NA
Dibenz(a,h)anthracene	3.9	J	6.2	1.1	ng/L			1	8270C	Total/NA
Fluoranthene	44		4.8	1.8	ng/L			1	8270C	Total/NA
Fluorene	1.4	J	4.3	0.89	ng/L			1	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	15		5.6	1.3	ng/L			1	8270C	Total/NA
Naphthalene	17		9.0	1.2	ng/L			1	8270C	Total/NA
Perylene	6.0		4.0	4.0	ng/L			1	8270C	Total/NA
Phenanthrene	11		6.6	3.4	ng/L			1	8270C	Total/NA
Pyrene	42		4.4	1.0	ng/L			1	8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-30514-1	W406	Water	06/27/12 08:00	06/28/12 09:30
280-30514-2	W401	Water	06/27/12 09:10	06/28/12 09:30
280-30514-3	W29	Water	06/27/12 10:05	06/28/12 09:30
280-30514-4	W48	Water	06/27/12 10:45	06/28/12 09:30
280-30514-5	W119	Water	06/27/12 12:00	06/28/12 09:30
280-30514-6	W119D	Water	06/27/12 12:00	06/28/12 09:30
280-30514-7	W119FB	Water	06/27/12 12:00	06/28/12 09:30
280-30514-8	W403	Water	06/27/12 14:40	06/28/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W406

Date Collected: 06/27/12 08:00

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.2	0.78	ng/L		07/03/12 15:05	07/24/12 13:13	1
2,3-Dihydroindene	ND		5.7	0.80	ng/L		07/03/12 15:05	07/24/12 13:13	1
1-Methylnaphthalene	ND		6.4	1.0	ng/L		07/03/12 15:05	07/24/12 13:13	1
2-Methylnaphthalene	ND		6.7	1.1	ng/L		07/03/12 15:05	07/24/12 13:13	1
Acenaphthene	ND		6.5	0.57	ng/L		07/03/12 15:05	07/24/12 13:13	1
Acenaphthylene	ND		5.5	0.88	ng/L		07/03/12 15:05	07/24/12 13:13	1
Acridine	ND	*	7.4	7.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Anthracene	ND		4.8	0.91	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo(b)thiophene	ND		5.9	0.86	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/03/12 15:05	07/24/12 13:13	1
Carbazole	ND		4.3	0.82	ng/L		07/03/12 15:05	07/24/12 13:13	1
Chrysene	ND		6.4	1.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Dibenz(a,h)anthracene	ND		6.7	1.2	ng/L		07/03/12 15:05	07/24/12 13:13	1
Dibenzofuran	ND		6.5	1.1	ng/L		07/03/12 15:05	07/24/12 13:13	1
Dibenzothiophene	ND		4.7	1.1	ng/L		07/03/12 15:05	07/24/12 13:13	1
Fluoranthene	ND		5.3	1.9	ng/L		07/03/12 15:05	07/24/12 13:13	1
Fluorene	ND		4.7	0.97	ng/L		07/03/12 15:05	07/24/12 13:13	1
Indene	ND		5.4	3.7	ng/L		07/03/12 15:05	07/24/12 13:13	1
Indole	ND		5.4	2.0	ng/L		07/03/12 15:05	07/24/12 13:13	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Naphthalene	2.6	J	9.8	1.3	ng/L		07/03/12 15:05	07/24/12 13:13	1
Perylene	ND		4.4	4.4	ng/L		07/03/12 15:05	07/24/12 13:13	1
Phenanthrene	ND		7.2	3.7	ng/L		07/03/12 15:05	07/24/12 13:13	1
Pyrene	8.3		4.8	1.1	ng/L		07/03/12 15:05	07/24/12 13:13	1
Quinoline	ND		10	6.5	ng/L		07/03/12 15:05	07/24/12 13:13	1
Biphenyl	ND		6.4	1.2	ng/L		07/03/12 15:05	07/24/12 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	07/03/12 15:05	07/24/12 13:13	1
Chrysene-d12 (Surr)	33		28 - 101	07/03/12 15:05	07/24/12 13:13	1
Naphthalene-d8 (Surr)	80		22 - 97	07/03/12 15:05	07/24/12 13:13	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W401

Date Collected: 06/27/12 09:10

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-2

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.70	ng/L		07/03/12 15:05	07/24/12 13:49	1
2,3-Dihydroindene	ND		5.2	0.72	ng/L		07/03/12 15:05	07/24/12 13:49	1
1-Methylnaphthalene	ND		5.8	0.92	ng/L		07/03/12 15:05	07/24/12 13:49	1
2-Methylnaphthalene	ND		6.1	1.0	ng/L		07/03/12 15:05	07/24/12 13:49	1
Acenaphthene	3.2	J B	5.9	0.52	ng/L		07/03/12 15:05	07/24/12 13:49	1
Acenaphthylene	ND		5.0	0.80	ng/L		07/03/12 15:05	07/24/12 13:49	1
Acridine	ND	*	6.7	6.7	ng/L		07/03/12 15:05	07/24/12 13:49	1
Anthracene	ND		4.3	0.83	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[a]anthracene	ND		4.4	0.95	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		07/03/12 15:05	07/24/12 13:49	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		07/03/12 15:05	07/24/12 13:49	1
Carbazole	ND		3.9	0.74	ng/L		07/03/12 15:05	07/24/12 13:49	1
Chrysene	ND		5.8	1.3	ng/L		07/03/12 15:05	07/24/12 13:49	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		07/03/12 15:05	07/24/12 13:49	1
Dibenzofuran	ND		5.9	1.0	ng/L		07/03/12 15:05	07/24/12 13:49	1
Dibenzothiophene	ND		4.2	1.0	ng/L		07/03/12 15:05	07/24/12 13:49	1
Fluoranthene	ND		4.8	1.7	ng/L		07/03/12 15:05	07/24/12 13:49	1
Fluorene	ND		4.2	0.88	ng/L		07/03/12 15:05	07/24/12 13:49	1
Indene	ND		4.9	3.4	ng/L		07/03/12 15:05	07/24/12 13:49	1
Indole	ND		4.9	1.8	ng/L		07/03/12 15:05	07/24/12 13:49	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		07/03/12 15:05	07/24/12 13:49	1
Naphthalene	2.8	J	8.9	1.2	ng/L		07/03/12 15:05	07/24/12 13:49	1
Perylene	ND		3.9	3.9	ng/L		07/03/12 15:05	07/24/12 13:49	1
Phenanthrene	ND		6.5	3.3	ng/L		07/03/12 15:05	07/24/12 13:49	1
Pyrene	3.2	J	4.3	1.0	ng/L		07/03/12 15:05	07/24/12 13:49	1
Quinoline	ND		9.3	5.8	ng/L		07/03/12 15:05	07/24/12 13:49	1
Biphenyl	ND		5.8	1.1	ng/L		07/03/12 15:05	07/24/12 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	84		23 - 84	07/03/12 15:05	07/24/12 13:49	1
Chrysene-d12 (Surr)	38		28 - 101	07/03/12 15:05	07/24/12 13:49	1
Naphthalene-d8 (Surr)	87		22 - 97	07/03/12 15:05	07/24/12 13:49	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W29

Date Collected: 06/27/12 10:05

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-3

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.76	J	5.6	0.70	ng/L		07/03/12 15:05	07/24/12 14:25	1
2,3-Dihydroindene	5.3		5.2	0.72	ng/L		07/03/12 15:05	07/24/12 14:25	1
1-Methylnaphthalene	6.8	B	5.8	0.92	ng/L		07/03/12 15:05	07/24/12 14:25	1
2-Methylnaphthalene	7.5	B	6.1	1.0	ng/L		07/03/12 15:05	07/24/12 14:25	1
Acenaphthene	13	B	5.9	0.52	ng/L		07/03/12 15:05	07/24/12 14:25	1
Acenaphthylene	2.0	J	5.0	0.80	ng/L		07/03/12 15:05	07/24/12 14:25	1
Acridine	ND	*	6.7	6.7	ng/L		07/03/12 15:05	07/24/12 14:25	1
Anthracene	3.8	J	4.3	0.83	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[a]anthracene	1.2	J	4.4	0.95	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo(b)thiophene	1.4	J	5.4	0.77	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		07/03/12 15:05	07/24/12 14:25	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		07/03/12 15:05	07/24/12 14:25	1
Carbazole	ND		3.9	0.74	ng/L		07/03/12 15:05	07/24/12 14:25	1
Chrysene	ND		5.8	1.3	ng/L		07/03/12 15:05	07/24/12 14:25	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		07/03/12 15:05	07/24/12 14:25	1
Dibenzofuran	3.3	J B	5.9	1.0	ng/L		07/03/12 15:05	07/24/12 14:25	1
Dibenzothiophene	3.0	J	4.2	1.0	ng/L		07/03/12 15:05	07/24/12 14:25	1
Fluoranthene	21		4.8	1.7	ng/L		07/03/12 15:05	07/24/12 14:25	1
Fluorene	14		4.2	0.88	ng/L		07/03/12 15:05	07/24/12 14:25	1
Indene	ND		4.9	3.4	ng/L		07/03/12 15:05	07/24/12 14:25	1
Indole	ND		4.9	1.8	ng/L		07/03/12 15:05	07/24/12 14:25	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		07/03/12 15:05	07/24/12 14:25	1
Naphthalene	17		8.9	1.2	ng/L		07/03/12 15:05	07/24/12 14:25	1
Perylene	ND		3.9	3.9	ng/L		07/03/12 15:05	07/24/12 14:25	1
Phenanthrene	7.6		6.5	3.3	ng/L		07/03/12 15:05	07/24/12 14:25	1
Pyrene	17		4.3	1.0	ng/L		07/03/12 15:05	07/24/12 14:25	1
Quinoline	ND		9.3	5.8	ng/L		07/03/12 15:05	07/24/12 14:25	1
Biphenyl	2.7	J	5.8	1.1	ng/L		07/03/12 15:05	07/24/12 14:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	85	X	23 - 84	07/03/12 15:05	07/24/12 14:25	1
Chrysene-d12 (Surr)	33		28 - 101	07/03/12 15:05	07/24/12 14:25	1
Naphthalene-d8 (Surr)	87		22 - 97	07/03/12 15:05	07/24/12 14:25	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W48

Lab Sample ID: 280-30514-4

Date Collected: 06/27/12 10:45

Matrix: Water

Date Received: 06/28/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.84	J	5.4	0.68	ng/L		07/03/12 15:05	07/24/12 15:01	1
2,3-Dihydroindene	3.9	J	5.0	0.70	ng/L		07/03/12 15:05	07/24/12 15:01	1
1-Methylnaphthalene	2.2	J B	5.6	0.89	ng/L		07/03/12 15:05	07/24/12 15:01	1
2-Methylnaphthalene	1.8	J B	5.9	0.98	ng/L		07/03/12 15:05	07/24/12 15:01	1
Acenaphthene	60	B	5.7	0.50	ng/L		07/03/12 15:05	07/24/12 15:01	1
Acenaphthylene	ND		4.8	0.77	ng/L		07/03/12 15:05	07/24/12 15:01	1
Acridine	ND	*	6.5	6.5	ng/L		07/03/12 15:05	07/24/12 15:01	1
Anthracene	3.2	J	4.2	0.80	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo(b)thiophene	6.9		5.2	0.75	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		07/03/12 15:05	07/24/12 15:01	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		07/03/12 15:05	07/24/12 15:01	1
Carbazole	0.90	J	3.8	0.72	ng/L		07/03/12 15:05	07/24/12 15:01	1
Chrysene	ND		5.6	1.2	ng/L		07/03/12 15:05	07/24/12 15:01	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		07/03/12 15:05	07/24/12 15:01	1
Dibenzofuran	ND		5.7	0.99	ng/L		07/03/12 15:05	07/24/12 15:01	1
Dibenzothiophene	ND		4.1	0.98	ng/L		07/03/12 15:05	07/24/12 15:01	1
Fluoranthene	ND		4.6	1.7	ng/L		07/03/12 15:05	07/24/12 15:01	1
Fluorene	ND		4.1	0.85	ng/L		07/03/12 15:05	07/24/12 15:01	1
Indene	24		4.7	3.3	ng/L		07/03/12 15:05	07/24/12 15:01	1
Indole	ND		4.7	1.7	ng/L		07/03/12 15:05	07/24/12 15:01	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		07/03/12 15:05	07/24/12 15:01	1
Naphthalene	5.5	J	8.6	1.1	ng/L		07/03/12 15:05	07/24/12 15:01	1
Perylene	ND		3.8	3.8	ng/L		07/03/12 15:05	07/24/12 15:01	1
Phenanthrene	ND		6.3	3.2	ng/L		07/03/12 15:05	07/24/12 15:01	1
Pyrene	1.2	J	4.2	0.99	ng/L		07/03/12 15:05	07/24/12 15:01	1
Quinoline	ND		9.0	5.7	ng/L		07/03/12 15:05	07/24/12 15:01	1
Biphenyl	ND		5.6	1.1	ng/L		07/03/12 15:05	07/24/12 15:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	50		23 - 84	07/03/12 15:05	07/24/12 15:01	1
Chrysene-d12 (Surr)	9	X	28 - 101	07/03/12 15:05	07/24/12 15:01	1
Naphthalene-d8 (Surr)	53		22 - 97	07/03/12 15:05	07/24/12 15:01	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W119

Date Collected: 06/27/12 12:00

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-5

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.75	ng/L		07/03/12 15:05	07/24/12 15:37	1
2,3-Dihydroindene	4.3	J	5.5	0.77	ng/L		07/03/12 15:05	07/24/12 15:37	1
1-Methylnaphthalene	1.0	J B	6.1	0.98	ng/L		07/03/12 15:05	07/24/12 15:37	1
2-Methylnaphthalene	ND		6.5	1.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Acenaphthene	21	B	6.3	0.55	ng/L		07/03/12 15:05	07/24/12 15:37	1
Acenaphthylene	2.5	J	5.3	0.85	ng/L		07/03/12 15:05	07/24/12 15:37	1
Acridine	ND	*	7.1	7.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Anthracene	3.9	J	4.6	0.88	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[a]anthracene	ND		4.7	1.0	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[a]pyrene	ND		2.7	1.4	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[e]pyrene	ND		4.7	1.3	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo(b)thiophene	5.4	J	5.7	0.82	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		07/03/12 15:05	07/24/12 15:37	1
Benzo[g,h,i]perylene	ND		6.8	1.3	ng/L		07/03/12 15:05	07/24/12 15:37	1
Carbazole	1.6	J	4.2	0.79	ng/L		07/03/12 15:05	07/24/12 15:37	1
Chrysene	ND		6.1	1.4	ng/L		07/03/12 15:05	07/24/12 15:37	1
Dibenz(a,h)anthracene	ND		6.5	1.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Dibenzofuran	ND		6.3	1.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Dibenzothiophene	ND		4.5	1.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Fluoranthene	ND		5.1	1.9	ng/L		07/03/12 15:05	07/24/12 15:37	1
Fluorene	ND		4.5	0.93	ng/L		07/03/12 15:05	07/24/12 15:37	1
Indene	10		5.2	3.6	ng/L		07/03/12 15:05	07/24/12 15:37	1
Indole	2.4	J	5.2	1.9	ng/L		07/03/12 15:05	07/24/12 15:37	1
Indeno[1,2,3-cd]pyrene	ND		5.9	1.4	ng/L		07/03/12 15:05	07/24/12 15:37	1
Naphthalene	4.1	J	9.4	1.3	ng/L		07/03/12 15:05	07/24/12 15:37	1
Perylene	ND		4.2	4.2	ng/L		07/03/12 15:05	07/24/12 15:37	1
Phenanthrene	ND		6.9	3.5	ng/L		07/03/12 15:05	07/24/12 15:37	1
Pyrene	11		4.6	1.1	ng/L		07/03/12 15:05	07/24/12 15:37	1
Quinoline	ND		9.9	6.2	ng/L		07/03/12 15:05	07/24/12 15:37	1
Biphenyl	ND		6.1	1.2	ng/L		07/03/12 15:05	07/24/12 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	82		23 - 84	07/03/12 15:05	07/24/12 15:37	1
Chrysene-d12 (Surr)	33		28 - 101	07/03/12 15:05	07/24/12 15:37	1
Naphthalene-d8 (Surr)	83		22 - 97	07/03/12 15:05	07/24/12 15:37	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W119D

Lab Sample ID: 280-30514-6

Date Collected: 06/27/12 12:00

Matrix: Water

Date Received: 06/28/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.71	ng/L		07/03/12 15:05	07/24/12 17:25	1
2,3-Dihydroindene	ND		5.2	0.73	ng/L		07/03/12 15:05	07/24/12 17:25	1
1-Methylnaphthalene	ND		5.8	0.93	ng/L		07/03/12 15:05	07/24/12 17:25	1
2-Methylnaphthalene	ND		6.2	1.0	ng/L		07/03/12 15:05	07/24/12 17:25	1
Acenaphthene	0.89	J B	5.9	0.52	ng/L		07/03/12 15:05	07/24/12 17:25	1
Acenaphthylene	ND		5.0	0.80	ng/L		07/03/12 15:05	07/24/12 17:25	1
Acridine	ND	*	6.8	6.8	ng/L		07/03/12 15:05	07/24/12 17:25	1
Anthracene	2.3	J	4.4	0.83	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[a]anthracene	ND		4.5	0.96	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/03/12 15:05	07/24/12 17:25	1
Benzo[g,h,i]perylene	ND		6.5	1.2	ng/L		07/03/12 15:05	07/24/12 17:25	1
Carbazole	1.1	J	4.0	0.75	ng/L		07/03/12 15:05	07/24/12 17:25	1
Chrysene	ND		5.8	1.3	ng/L		07/03/12 15:05	07/24/12 17:25	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		07/03/12 15:05	07/24/12 17:25	1
Dibenzofuran	ND		5.9	1.0	ng/L		07/03/12 15:05	07/24/12 17:25	1
Dibenzothiophene	ND		4.3	1.0	ng/L		07/03/12 15:05	07/24/12 17:25	1
Fluoranthene	ND		4.8	1.8	ng/L		07/03/12 15:05	07/24/12 17:25	1
Fluorene	ND		4.3	0.89	ng/L		07/03/12 15:05	07/24/12 17:25	1
Indene	ND		4.9	3.4	ng/L		07/03/12 15:05	07/24/12 17:25	1
Indole	ND		4.9	1.8	ng/L		07/03/12 15:05	07/24/12 17:25	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		07/03/12 15:05	07/24/12 17:25	1
Naphthalene	ND		9.0	1.2	ng/L		07/03/12 15:05	07/24/12 17:25	1
Perylene	ND		4.0	4.0	ng/L		07/03/12 15:05	07/24/12 17:25	1
Phenanthrene	ND		6.6	3.3	ng/L		07/03/12 15:05	07/24/12 17:25	1
Pyrene	7.0		4.4	1.0	ng/L		07/03/12 15:05	07/24/12 17:25	1
Quinoline	ND		9.4	5.9	ng/L		07/03/12 15:05	07/24/12 17:25	1
Biphenyl	ND		5.8	1.1	ng/L		07/03/12 15:05	07/24/12 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	9	X	23 - 84	07/03/12 15:05	07/24/12 17:25	1
Chrysene-d12 (Surr)	32		28 - 101	07/03/12 15:05	07/24/12 17:25	1
Naphthalene-d8 (Surr)	0.7	X	22 - 97	07/03/12 15:05	07/24/12 17:25	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W119FB

Lab Sample ID: 280-30514-7

Date Collected: 06/27/12 12:00

Matrix: Water

Date Received: 06/28/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.8	0.73	ng/L		07/03/12 15:05	07/24/12 18:01	1
2,3-Dihydroindene	ND		5.4	0.75	ng/L		07/03/12 15:05	07/24/12 18:01	1
1-Methylnaphthalene	ND		6.0	0.95	ng/L		07/03/12 15:05	07/24/12 18:01	1
2-Methylnaphthalene	ND		6.3	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Acenaphthene	ND		6.1	0.54	ng/L		07/03/12 15:05	07/24/12 18:01	1
Acenaphthylene	ND		5.1	0.83	ng/L		07/03/12 15:05	07/24/12 18:01	1
Acridine	ND	*	7.0	7.0	ng/L		07/03/12 15:05	07/24/12 18:01	1
Anthracene	ND		4.5	0.86	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo(b)thiophene	ND		5.6	0.80	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		07/03/12 15:05	07/24/12 18:01	1
Benzo[g,h,i]perylene	ND		6.6	1.3	ng/L		07/03/12 15:05	07/24/12 18:01	1
Carbazole	ND		4.1	0.77	ng/L		07/03/12 15:05	07/24/12 18:01	1
Chrysene	ND		6.0	1.3	ng/L		07/03/12 15:05	07/24/12 18:01	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Dibenzofuran	ND		6.1	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Dibenzothiophene	ND		4.4	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Fluoranthene	ND		4.9	1.8	ng/L		07/03/12 15:05	07/24/12 18:01	1
Fluorene	ND		4.4	0.91	ng/L		07/03/12 15:05	07/24/12 18:01	1
Indene	ND		5.0	3.5	ng/L		07/03/12 15:05	07/24/12 18:01	1
Indole	ND		5.0	1.9	ng/L		07/03/12 15:05	07/24/12 18:01	1
Indeno[1,2,3-cd]pyrene	ND		5.8	1.4	ng/L		07/03/12 15:05	07/24/12 18:01	1
Naphthalene	4.9	J	9.2	1.2	ng/L		07/03/12 15:05	07/24/12 18:01	1
Perylene	ND		4.1	4.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Phenanthrene	ND		6.8	3.4	ng/L		07/03/12 15:05	07/24/12 18:01	1
Pyrene	ND		4.5	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Quinoline	ND		9.6	6.1	ng/L		07/03/12 15:05	07/24/12 18:01	1
Biphenyl	ND		6.0	1.1	ng/L		07/03/12 15:05	07/24/12 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	82		23 - 84	07/03/12 15:05	07/24/12 18:01	1
Chrysene-d12 (Surr)	94		28 - 101	07/03/12 15:05	07/24/12 18:01	1
Naphthalene-d8 (Surr)	88		22 - 97	07/03/12 15:05	07/24/12 18:01	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W403

Lab Sample ID: 280-30514-8

Date Collected: 06/27/12 14:40

Matrix: Water

Date Received: 06/28/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.71	ng/L		07/03/12 15:05	07/26/12 17:16	1
2,3-Dihydroindene	4.7	J	5.2	0.73	ng/L		07/03/12 15:05	07/26/12 17:16	1
1-Methylnaphthalene	3.2	J B	5.8	0.93	ng/L		07/03/12 15:05	07/26/12 17:16	1
2-Methylnaphthalene	6.8	B	6.2	1.0	ng/L		07/03/12 15:05	07/26/12 17:16	1
Acenaphthene	0.78	J B	6.0	0.52	ng/L		07/03/12 15:05	07/26/12 17:16	1
Acenaphthylene	5.1		5.0	0.80	ng/L		07/03/12 15:05	07/26/12 17:16	1
Acridine	ND	*	6.8	6.8	ng/L		07/03/12 15:05	07/26/12 17:16	1
Anthracene	4.9		4.4	0.84	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[a]anthracene	29		4.5	0.96	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[a]pyrene	26		2.6	1.3	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[e]pyrene	19		4.5	1.2	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[b]fluoranthene	46		4.9	1.5	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/03/12 15:05	07/26/12 17:16	1
Benzo[g,h,i]perylene	16		6.5	1.2	ng/L		07/03/12 15:05	07/26/12 17:16	1
Carbazole	2.0	J	4.0	0.75	ng/L		07/03/12 15:05	07/26/12 17:16	1
Chrysene	29		5.8	1.3	ng/L		07/03/12 15:05	07/26/12 17:16	1
Dibenz(a,h)anthracene	3.9	J	6.2	1.1	ng/L		07/03/12 15:05	07/26/12 17:16	1
Dibenzofuran	ND		6.0	1.0	ng/L		07/03/12 15:05	07/26/12 17:16	1
Dibenzothiophene	ND		4.3	1.0	ng/L		07/03/12 15:05	07/26/12 17:16	1
Fluoranthene	44		4.8	1.8	ng/L		07/03/12 15:05	07/26/12 17:16	1
Fluorene	1.4	J	4.3	0.89	ng/L		07/03/12 15:05	07/26/12 17:16	1
Indene	ND		4.9	3.4	ng/L		07/03/12 15:05	07/26/12 17:16	1
Indole	ND		4.9	1.8	ng/L		07/03/12 15:05	07/26/12 17:16	1
Indeno[1,2,3-cd]pyrene	15		5.6	1.3	ng/L		07/03/12 15:05	07/26/12 17:16	1
Naphthalene	17		9.0	1.2	ng/L		07/03/12 15:05	07/26/12 17:16	1
Perylene	6.0		4.0	4.0	ng/L		07/03/12 15:05	07/26/12 17:16	1
Phenanthrene	11		6.6	3.4	ng/L		07/03/12 15:05	07/26/12 17:16	1
Pyrene	42		4.4	1.0	ng/L		07/03/12 15:05	07/26/12 17:16	1
Quinoline	ND		9.4	5.9	ng/L		07/03/12 15:05	07/26/12 17:16	1
Biphenyl	ND		5.8	1.1	ng/L		07/03/12 15:05	07/26/12 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	66		23 - 84	07/03/12 15:05	07/26/12 17:16	1
Chrysene-d12 (Surr)	13	X	28 - 101	07/03/12 15:05	07/26/12 17:16	1
Naphthalene-d8 (Surr)	64		22 - 97	07/03/12 15:05	07/26/12 17:16	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-30514-1	W406	75	33	80
280-30514-2	W401	84	38	87
280-30514-3	W29	85 X	33	87
280-30514-4	W48	50	9 X	53
280-30514-5	W119	82	33	83
280-30514-5 MS	W119	83	81	80
280-30514-5 MSD	W119	88 X	45	84
280-30514-6	W119D	9 X	32	0.7 X
280-30514-7	W119FB	82	94	88
280-30514-8	W403	66	13 X	64
LCS 280-126528/2-A	Lab Control Sample	81	96	89
MB 280-126528/1-A	Method Blank	73	88	83

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-126528/1-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		07/03/12 15:05	07/24/12 10:09	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		07/03/12 15:05	07/24/12 10:09	1
1-Methylnaphthalene	1.41	J	5.6	0.89	ng/L		07/03/12 15:05	07/24/12 10:09	1
2-Methylnaphthalene	1.83	J	5.9	0.98	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acenaphthene	1.10	J	5.7	0.50	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acenaphthylene	ND		4.8	0.77	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acridine	ND		6.5	6.5	ng/L		07/03/12 15:05	07/24/12 10:09	1
Anthracene	ND		4.2	0.80	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Carbazole	ND		3.8	0.72	ng/L		07/03/12 15:05	07/24/12 10:09	1
Chrysene	ND		5.6	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenzofuran	1.64	J	5.7	0.99	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenzothiophene	ND		4.1	0.98	ng/L		07/03/12 15:05	07/24/12 10:09	1
Fluoranthene	ND		4.6	1.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Fluorene	ND		4.1	0.85	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indene	ND		4.7	3.3	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indole	ND		4.7	1.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		07/03/12 15:05	07/24/12 10:09	1
Naphthalene	ND		8.6	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1
Perylene	ND		3.8	3.8	ng/L		07/03/12 15:05	07/24/12 10:09	1
Phenanthrene	ND		6.3	3.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Pyrene	ND		4.2	0.99	ng/L		07/03/12 15:05	07/24/12 10:09	1
Quinoline	ND		9.0	5.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Biphenyl	ND		5.6	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	73		23 - 84	07/03/12 15:05	07/24/12 10:09	1
Chrysene-d12 (Surr)	88		28 - 101	07/03/12 15:05	07/24/12 10:09	1
Naphthalene-d8 (Surr)	83		22 - 97	07/03/12 15:05	07/24/12 10:09	1

Lab Sample ID: LCS 280-126528/2-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	63.8		ng/L		85	30 - 150
2,3-Dihydroindene	75.0	57.3		ng/L		76	30 - 150
1-Methylnaphthalene	75.0	64.8		ng/L		86	30 - 150
2-Methylnaphthalene	75.0	64.3		ng/L		86	25 - 95
3-Methylcholanthrene	75.0	39.1		ng/L		52	30 - 150
Acenaphthene	75.0	65.9		ng/L		88	30 - 150
Acenaphthylene	75.0	61.2		ng/L		82	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126528/2-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	9.17	*	ng/L		12	30 - 150
Anthracene	75.0	59.7		ng/L		80	30 - 150
Benzo[a]anthracene	75.0	58.9		ng/L		79	30 - 150
Benzo[a]pyrene	75.0	57.1		ng/L		76	30 - 150
Benzo[e]pyrene	75.0	67.4		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	60.9		ng/L		81	30 - 150
Benzo(b)thiophene	75.0	66.6		ng/L		89	30 - 150
Benzo[k]fluoranthene	75.0	72.5		ng/L		97	30 - 150
Benzo[g,h,i]perylene	75.0	64.3		ng/L		86	30 - 150
Carbazole	75.0	59.9		ng/L		80	30 - 150
Chrysene	75.0	74.5		ng/L		99	20 - 136
Dibenz(a,h)anthracene	75.0	67.5		ng/L		90	30 - 150
Dibenzofuran	75.0	66.0		ng/L		88	30 - 150
Dibenzothiophene	75.0	65.9		ng/L		88	30 - 150
Fluoranthene	75.0	56.8		ng/L		76	30 - 150
Fluorene	75.0	66.0		ng/L		88	34 - 96
Indene	75.0	60.8		ng/L		81	22 - 86
Indole	75.0	63.1		ng/L		84	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	65.8		ng/L		88	30 - 150
Naphthalene	75.0	65.2		ng/L		87	27 - 95
Perylene	75.0	71.8		ng/L		96	30 - 150
Phenanthrene	75.0	63.3		ng/L		84	30 - 150
Pyrene	75.0	51.4		ng/L		69	30 - 150
Quinoline	75.0	44.3		ng/L		59	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	13.2	*	ng/L		18	30 - 150
Biphenyl	75.0	66.1		ng/L		88	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	96		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

Lab Sample ID: 280-30514-5 MS

Matrix: Water

Analysis Batch: 129495

Client Sample ID: W119

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		78.0	59.3		ng/L		76	30 - 150
2,3-Dihydroindene	4.3	J	78.0	58.2		ng/L		69	30 - 150
1-Methylnaphthalene	1.0	J B	78.0	64.6		ng/L		81	30 - 150
2-Methylnaphthalene	ND		78.0	64.3		ng/L		82	25 - 95
3-Methylcholanthrene	ND		78.0	14.2	F	ng/L		18	30 - 150
Acenaphthene	21	B	78.0	87.6		ng/L		85	30 - 150
Acenaphthylene	2.5	J	78.0	86.8		ng/L		108	30 - 150
Acridine	ND	*	78.0	74.6		ng/L		96	30 - 150
Anthracene	3.9	J	78.0	93.1		ng/L		114	30 - 150
Benzo[a]anthracene	ND		78.0	63.6		ng/L		81	30 - 150
Benzo[a]pyrene	ND		78.0	13.0	F	ng/L		17	30 - 150
Benzo[e]pyrene	ND		78.0	12.0	F	ng/L		15	37 - 105

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30514-5 MS

Matrix: Water

Analysis Batch: 129495

Client Sample ID: W119

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	ND		78.0	14.8	F	ng/L		19	30 - 150
Benzo(b)thiophene	5.4	J	78.0	69.2		ng/L		82	30 - 150
Benzo[k]fluoranthene	ND		78.0	13.1	F	ng/L		17	30 - 150
Benzo[g,h,i]perylene	ND		78.0	4.24	J F	ng/L		5	30 - 150
Carbazole	1.6	J	78.0	89.9		ng/L		113	30 - 150
Chrysene	ND		78.0	47.4		ng/L		61	20 - 136
Dibenz(a,h)anthracene	ND		78.0	4.25	J F	ng/L		5	30 - 150
Dibenzofuran	ND		78.0	66.7		ng/L		85	30 - 150
Dibenzothiophene	ND		78.0	70.4		ng/L		90	30 - 150
Fluoranthene	ND		78.0	72.7		ng/L		93	30 - 150
Fluorene	ND		78.0	69.7		ng/L		89	34 - 96
Indene	10		78.0	68.7		ng/L		75	22 - 86
Indole	2.4	J	78.0	68.9		ng/L		85	30 - 150
Indeno[1,2,3-cd]pyrene	ND		78.0	4.86	J F	ng/L		6	30 - 150
Naphthalene	4.1	J	78.0	67.2		ng/L		81	27 - 95
Perylene	ND		78.0	11.1	F	ng/L		14	30 - 150
Phenanthrene	ND		78.0	65.5		ng/L		84	30 - 150
Pyrene	11		78.0	78.3		ng/L		86	30 - 150
Quinoline	ND		78.0	75.0		ng/L		96	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		78.0	86.2		ng/L		110	30 - 150
Biphenyl	ND		78.0	63.9		ng/L		82	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	81		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

Lab Sample ID: 280-30514-5 MSD

Matrix: Water

Analysis Batch: 129495

Client Sample ID: W119

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	ND		85.4	69.3		ng/L		81	30 - 150	16	50
2,3-Dihydroindene	4.3	J	85.4	65.8		ng/L		72	30 - 150	12	50
1-Methylnaphthalene	1.0	J B	85.4	73.0		ng/L		84	30 - 150	12	50
2-Methylnaphthalene	ND		85.4	72.6		ng/L		85	25 - 95	12	50
3-Methylcholanthrene	ND		85.4	9.88	F	ng/L		12	30 - 150	36	50
Acenaphthene	21	B	85.4	99.0		ng/L		91	30 - 150	12	50
Acenaphthylene	2.5	J	85.4	99.6		ng/L		114	30 - 150	14	50
Acridine	ND	*	85.4	87.1		ng/L		102	30 - 150	15	50
Anthracene	3.9	J	85.4	105		ng/L		118	30 - 150	12	50
Benzo[a]anthracene	ND		85.4	48.5		ng/L		57	30 - 150	27	50
Benzo[a]pyrene	ND		85.4	8.36	F	ng/L		10	30 - 150	44	50
Benzo[e]pyrene	ND		85.4	7.70	F	ng/L		9	37 - 105	44	50
Benzo[b]fluoranthene	ND		85.4	10.2	F	ng/L		12	30 - 150	37	50
Benzo(b)thiophene	5.4	J	85.4	78.6		ng/L		86	30 - 150	13	50
Benzo[k]fluoranthene	ND		85.4	8.27	F	ng/L		10	30 - 150	45	50
Benzo[g,h,i]perylene	ND		85.4	2.79	J F	ng/L		3	30 - 150	41	50
Carbazole	1.6	J	85.4	98.3		ng/L		113	30 - 150	9	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30514-5 MSD

Matrix: Water

Analysis Batch: 129495

Client Sample ID: W119

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		85.4	37.2		ng/L		44	20 - 136	24	50
Dibenz(a,h)anthracene	ND		85.4	2.95	J F	ng/L		3	30 - 150	36	50
Dibenzofuran	ND		85.4	76.6		ng/L		90	30 - 150	14	50
Dibenzothiophene	ND		85.4	80.1		ng/L		94	30 - 150	13	50
Fluoranthene	ND		85.4	79.4		ng/L		93	30 - 150	9	50
Fluorene	ND		85.4	79.7		ng/L		93	34 - 96	13	50
Indene	10		85.4	78.4		ng/L		80	22 - 86	13	50
Indole	2.4	J	85.4	70.4		ng/L		80	30 - 150	2	50
Indeno[1,2,3-cd]pyrene	ND		85.4	3.13	J F	ng/L		4	30 - 150	43	50
Naphthalene	4.1	J	85.4	76.0		ng/L		84	27 - 95	12	50
Perylene	ND		85.4	7.87	F	ng/L		9	30 - 150	34	50
Phenanthrene	ND		85.4	74.4		ng/L		87	30 - 150	13	50
Pyrene	11		85.4	84.4		ng/L		86	30 - 150	8	50
Quinoline	ND		85.4	87.0		ng/L		102	20 - 112	15	50
7,12-Dimethylbenz(a)anthracene	ND		85.4	87.2		ng/L		102	30 - 150	1	50
Biphenyl	ND		85.4	73.0		ng/L		85	30 - 150	13	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	45		28 - 101
Naphthalene-d8 (Surr)	84		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

GC/MS Semi VOA

Prep Batch: 126528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30514-1	W406	Total/NA	Water	3520C	
280-30514-2	W401	Total/NA	Water	3520C	
280-30514-3	W29	Total/NA	Water	3520C	
280-30514-4	W48	Total/NA	Water	3520C	
280-30514-5	W119	Total/NA	Water	3520C	
280-30514-5 MS	W119	Total/NA	Water	3520C	
280-30514-5 MSD	W119	Total/NA	Water	3520C	
280-30514-6	W119D	Total/NA	Water	3520C	
280-30514-7	W119FB	Total/NA	Water	3520C	
280-30514-8	W403	Total/NA	Water	3520C	
LCS 280-126528/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126528/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 129495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30514-1	W406	Total/NA	Water	8270C	126528
280-30514-2	W401	Total/NA	Water	8270C	126528
280-30514-3	W29	Total/NA	Water	8270C	126528
280-30514-4	W48	Total/NA	Water	8270C	126528
280-30514-5	W119	Total/NA	Water	8270C	126528
280-30514-5 MS	W119	Total/NA	Water	8270C	126528
280-30514-5 MSD	W119	Total/NA	Water	8270C	126528
280-30514-6	W119D	Total/NA	Water	8270C	126528
280-30514-7	W119FB	Total/NA	Water	8270C	126528
LCS 280-126528/2-A	Lab Control Sample	Total/NA	Water	8270C	126528
MB 280-126528/1-A	Method Blank	Total/NA	Water	8270C	126528

Analysis Batch: 129782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30514-8	W403	Total/NA	Water	8270C	126528

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W406

Date Collected: 06/27/12 08:00

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3500 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 13:13	KGV	TAL DEN

Client Sample ID: W401

Date Collected: 06/27/12 09:10

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3866.2 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 13:49	KGV	TAL DEN

Client Sample ID: W29

Date Collected: 06/27/12 10:05

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3873.3 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 14:25	KGV	TAL DEN

Client Sample ID: W48

Date Collected: 06/27/12 10:45

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3999.8 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 15:01	KGV	TAL DEN

Client Sample ID: W119

Date Collected: 06/27/12 12:00

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3642.5 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 15:37	KGV	TAL DEN

Client Sample ID: W119D

Date Collected: 06/27/12 12:00

Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3835.1 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 17:25	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Client Sample ID: W119FB
Date Collected: 06/27/12 12:00
Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3731.3 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 18:01	KGV	TAL DEN

Client Sample ID: W403
Date Collected: 06/27/12 14:40
Date Received: 06/28/12 09:30

Lab Sample ID: 280-30514-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3831 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129782	07/26/12 17:16	KGV	TAL DEN

Laboratory References:
TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30514-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-12
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-31-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-12
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-12
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-12
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-12
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID

Chain of Custody Record

TAL-4124-280 (0508)

Client: **Summit Environmental Solutions** Project Manager: **Bill Gregg** Date: **6/27/12** Chain of Custody Number: **151476**

Address: **1217 Barbara Blvd. N.** Telephone Number (Area Code)/Pal Number: **(651) 262-4236** Lab Number: **1** of **1**

City: **St. Paul** State: **MN** Zip Code: **55108**

Project Name and Location (State): **Railly Site (MN)** Carrier/Waybill Number: **FedEx**

Contract/Purchase Order/Quote No.: **0987-0009**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
			Air	Soil	Sed.	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH		
W406	6/27/12	8:00	X											
W401		9:10												
W29		10:05												
W48		10:45												
W119		12:00												
W119 MS		12:00												
W119 MSD		12:00												
W119 D		12:00												
W119 FB		12:00												
W403		14:40												

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ☐ Months ☐ Months ☐ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other

1. Relinquished By: **[Signature]** Date: **6/27/12** Time: **19:00**

2. Relinquished By: **[Signature]** Date: **6/27/12** Time: **19:30**

3. Relinquished By: **[Signature]** Date: **6/27/12** Time: **19:30**

Comments: **627575**

Custody Seals: **627571-627575** (5 coolers)

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Login Number: 30514

List Source: TestAmerica Denver

List Number: 1

Creator: Lazarte, Noah M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-30514-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2013

SLP\280-30514PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for seven aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-30514-1 in a single data package. The following samples were reported:

W406	W401	W29	W48
W119	W119D	W119FB	W403

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for benzo[a]anthracene in W403 was qualified as estimated (J) and may be biased high.
- Results for 1-methylnaphthalene in W29, W48, W403, and W119; 2-methylnaphthalene in W29, W403, and W48; acenaphthene in W401, W119D, and W403; and dibenzofuran in W29 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Detected results for naphthalene in all field samples were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene in W-48 and W403 were qualified as estimated (L) and nondetects were rejected (R).
- Results for all compounds in W119D except acenaphthene, benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene were qualified as estimated (L) and nondetects were rejected (R).
- The result for acenaphthene in W119D was qualified as estimated (UJ).

- Results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene in all field samples were qualified as estimated (L, UJ).
- Results for benzo[g,h,i] perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects.
- Results for acridine in all samples except W119D were qualified as estimated low (L, UJ).
- Results for 2,3-dihydroindene, 1-methylnaphthalene, acenaphthylene, benzo (b) thiophene, and indole in W119 were qualified as not detected (U) at the RL.
- Results for pyrene in W119 and W119D were qualified as estimated (L).

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a "tentative identification".
- NJ= The analysis indicates the presence of an compound that has been "tentatively identified" and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of June 25, 2012. The samples were shipped via Federal Express and received by the laboratory on June 26, 2012. The temperature of the coolers on receipt at the laboratory was noted on the COC and was acceptable (1.2° C to 3.2° C; criteria 4.0° C \pm 2.0° C). All samples were extracted on July 3, 2012, within the 7-day holding time for aqueous samples. All sample extracts were analyzed on July 24 and 26, 2012, 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "MSS_F". Three perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. All of the performance checks were documented with summary forms and were acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on July 20, 2012, for most of the target compounds. One 7-point IC was performed on July 26, 2012, for all of the target compounds. For three of the target compounds, the low level standard was omitted from the IC. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after each of the ICs. All percent difference (%D) values and RRFs were acceptable with the exception of benzo[a]anthracene (59.9%D) in the ICV analyzed on

July 26, 2012. The result for benzo[a]anthracene in W403 was qualified as estimated (J) and may be biased high on this basis. It should be noted that the ICVs contained only 21 of the 31 target compounds. No data were qualified on this basis.

B. Continuing Calibration (CC)

One CC was performed on July 24, 2012, in support of all the target compounds. All %D results were within the acceptance limits (35%) as defined in the QAPP.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. The following target compounds were reported in the method blank:

<u>Compound</u>	<u>Amount Reported (ng/L)</u>
1-methylnaphthalene	1.41
2-methylnaphthalene	1.83
acenaphthene	1.10
dibenzofuran	1.64

Results for reported compounds less than five times the amount detected in the method blank are qualified as not detected (U) at the analyte-specific reporting limit. Results for 1-methylnaphthalene in W29, W48, W403, and W119; 2-methylnaphthalene in W29, W403, and W48; acenaphthene in W401, W119D, and W403; and dibenzofuran in W29 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to sample concentrations detected within five-times the concentration found in the method blank.

One field blank (W119FB) was submitted with these samples. Naphthalene was reported in the field blank at 4.9 ng/L. Detected results for naphthalene in all field samples were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to field blank contamination.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits except as summarized below:

<u>Sample</u>	<u>Surrogate</u>	<u>%R</u>	<u>Acceptance Criteria (%)</u>
W29	Fluorene-d ₁₀	85	23-84
W48	Chrysene-d ₁₂	9	28-101
W119D	Naphthalene-d ₈	0.7	22-97
W119D	Fluorene-d ₁₀	9	23-84
W403	Chrysene-d ₁₂	13	28-101

No results were qualified based on the fluorene-d₁₀ excursion in W29 since the upper limit of the acceptance criteria is low and the percent recovery did not excessively exceed the limit.

Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene in W-48 and W403 were qualified as estimated (L) and nondetects were rejected (R) due to the low recovery of chrysene-d₁₂. Results for all compounds in W119D except acenaphthene, benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene were qualified as estimated (L) and nondetects were rejected (R) due to the low recoveries of naphthalene-d₈ and fluorene-d₁₀. The result for acenaphthene in W119D was qualified as estimated (UJ) because even though the associated surrogate recovery was less than 10% warranting a rejection of a non-detect, the laboratory had detected the analyte in the sample, but the result was qualified as not detected (U) due to method blank contamination.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample W119. Percent recoveries (%R) and relative percent difference (RPD) values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo[a]anthracene			27	30-150 (25)	J/UJ
Benzo[a]pyrene	17	10	44	30-150 (25)	L/UJ
Benzo[e]pyrene	15	9	44	37-150 (25)	L/R
Benzo[b]fluoranthene	19	12	37	30-150 (25)	L/UJ
Benzo[k]fluoranthene	17	10	45	30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	3	41	30-150 (25)	L/R
Dibenz[a,h]anthracene	5	3	36	30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	4	43	30-150 (25)	L/R
Perylene	14	9	34	30-150 (25)	L/R

*based on amount recovered.

Results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene in all field samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries and/or RPD values. Results for benzo[g,h,i] perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of acridine (12%R; criteria 30-150%R). Results for acridine in all samples except W119D were qualified as estimated (UJ) due to unacceptable LCS recovery. The result for acridine in W119D was previously rejected due to surrogate excursions, and the rejected qualifier takes precedence.

VII. Field Duplicate

Sample W119D was collected as a field duplicate of sample W119. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate samples.

Results for 2,3-dihydroindene, 1-methylnaphthalene, acenaphthylene, benzo (b) thiopene, acenaphthalene, indene, and indole in W119 were qualified as not detected (U) at the RL because these analytes were detected in W119 but not in the paired duplicate. Results for pyrene in W119 and W119D were qualified as estimated (J) due to a high relative percent difference between the paired results.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limits were equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene for which the RLs were equal to the MDLs. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".
- No ratios or spectra were included in the data package to support the identification of the reported compounds. The validation was completed on the assumption that all of the ion ratios for the reported compounds were acceptable.

These issues discussed above affect the validity of the reported data, and may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for benzo[a]anthracene in W403 was qualified as estimated (J) and may be biased high due to the high %D in the associated ICV.
- Results for 1-methylnaphthalene in W29, W48, W403, and W119; 2-methylnaphthalene in W29, W403, and W48; acenaphthene in W401, W119D, and W403; and dibenzofuran in W29 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to sample concentrations detected within five-times the concentration found in the method blank.
- Detected results for naphthalene in all field samples were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to field blank contamination.
- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene in W-48 and W403 were qualified as estimated (L) and nondetects were rejected (R) due to the low recovery of chrysene-d₁₂.
- Results for all compounds in W119D except acenaphthene, benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, pyrene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene were qualified as estimated (L) and nondetects were rejected (R) due to the low recoveries of naphthalene-d₈ and fluorene-d₁₀. The result for acenaphthene in W119D was qualified as estimated (UJ) because even though the associated surrogate recovery was less than 10% warranting a rejection of a non-detect, the laboratory had detected the analyte in the sample, but the result was qualified as not detected (U) due to method blank contamination.
- Results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene in all field samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries and/or RPD values.
- Results for benzo[g,h,i] perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

- Results for acridine in all samples except W119D were qualified as estimated low (L, UJ) at the RL due to unacceptable LCS recovery.
- Results for 2,3-dihydroindene, 1-methylnaphthalene, acenaphthylene, benzo (b) thiophene, acenaphthene, indene, and indole in W119 were qualified as not detected (U) at the RL because these analytes were detected in W119 but not in the paired duplicate.
- Results for pyrene in W119 and W119D were qualified as estimated (J) due to a high relative percent difference between the paired results.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ATTACHMENT A

**DATA SUMMARY FORMS
Laboratory Job No. 280-30514
PAHs in Water**

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 27, 2012

Job No. 280-30514-1

ddms Project No. 2006-0022

Sample Location		W406		W401		W29		W48		W119		W119D	
Lab Sample ID		280-30514-1		280-30514-2		280-30514-3		280-30514-4		280-30514-5		280-30514-6	
Initial Volume		3500		3866.2		3873.3		3999.8		3642.5		3835.1	
Dilution Factor		1.14		1.03		1.03		1.00		1.10		1.04	
RL													
5.4	2,3-Benzofuran					0.76	J	0.84	J			R	
5.0	2,3-Dihydroindene					5.3		3.9	J		U	R	
5.6	1-Methylnaphthalene					6.8	U		U		U	R	
5.9	2-Methylnaphthalene					7.5	U		U			R	
5.7	Acenaphthene				U	13		60		21	U		UJ
4.8	Acenaphthylene					2.0	J				U	R	
6.5	Acridine		UJ		UJ		UJ		UJ		UJ	R	
4.2	Anthracene					3.8	J	3.2	J	3.9	J	2.3	L
4.3	Benzo[a]anthracene		UJ		UJ	1.2	J	R			UJ		UJ
2.5	Benzo[a]pyrene		UJ		UJ		UJ	R			UJ		UJ
4.3	Benzo[e]pyrene	R		R		R		R		R		R	
4.7	Benzo[b]fluoranthene		UJ		UJ		UJ	R			UJ		UJ
5.2	Benzo(b)thiopene					1.4	J	6.9		5.4	U	R	
4.1	Benzo[k]fluoranthene		UJ		UJ		UJ	R			UJ		UJ
6.2	Benzo[g,h,i]perylene	R		R		R		R		R			
3.8	Carbazole							0.90	J	1.6	J	1.1	J
5.6	Chrysene	R		R		R		R		R		R	
5.9	Dibenz(a,h)anthracene							R					
5.7	Dibenzofuran						U					R	
4.1	Dibenzothiophene					3.0	J					R	
4.6	Fluoranthene											R	
4.1	Fluorene											R	
4.7	Indene							24		10	U	R	
4.7	Indole										U	R	
5.4	Indeno[1,2,3-cd]pyrene	R		R		R		R		R		R	
8.6	Naphthalene		U		U	17	U		U		U	R	
3.8	Perylene	R		R		R		R		R		R	
6.3	Phenanthrene					7.6						R	
4.2	Pyrene	8.3		3.2	J	17		1.2	L	11	J	7.0	J
9.0	Quinoline											R	
5.6	Biphenyl					2.7	J					R	

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 27, 2012

Job No. 280-30514-1

ddms Project No. 2006-0022

[illegible]

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS

Laboratory Job No. 280-30514

PAHs in Water

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W406

Lab Sample ID: 280-30514-1

Client Matrix: Water

Date Sampled: 06/27/2012 0800

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5315.D
Dilution:	1.0			Initial Weight/Volume:	3500 mL
Analysis Date:	07/24/2012 1313			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	ND		0.80	5.7
1-Methylnaphthalene	ND		1.0	6.4
2-Methylnaphthalene	ND		1.1	6.7
Acenaphthene	ND		0.57	6.5
Acenaphthylene	ND		0.88	5.5
Acridine	ND	US	7.4	7.4
Anthracene	ND		0.91	4.8
Benzo[a]anthracene	ND	US	1.1	4.9
Benzo[a]pyrene	ND		1.4	2.9
Benzo[e]pyrene	R ND		1.3	4.9
Benzo[b]fluoranthene	ND	US	1.6	5.4
Benzo(b)thiophene	ND		0.86	5.9
Benzo[k]fluoranthene	ND	US	1.4	4.7
Benzo[g,h,i]perylene	R ND		1.3	7.1
Carbazole	ND		0.82	4.3
Chrysene	R ND		1.4	6.4
Dibenz(a,h)anthracene	R ND		1.2	6.7
Dibenzofuran	ND		1.1	6.5
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.97	4.7
Indene	ND		3.7	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ND		1.4	6.2
Naphthalene	2.6	US	1.3	9.8
Perylene	R ND		4.4	4.4
Phenanthrene	ND		3.7	7.2
Pyrene	8.3		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	33		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W401

Lab Sample ID: 280-30514-2

Date Sampled: 06/27/2012 0910

Client Matrix: Water

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5316.D
Dilution:	1.0			Initial Weight/Volume:	3866.2 mL
Analysis Date:	07/24/2012 1349			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.6
2,3-Dihydroindene	ND		0.72	5.2
1-Methylnaphthalene	ND		0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthene	3.2	JB U	0.52	5.9
Acenaphthylene	ND		0.80	5.0
Acridine	ND	+ US	6.7	6.7
Anthracene	ND		0.83	4.3
Benzo[a]anthracene	ND	US	0.95	4.4
Benzo[a]pyrene	ND	US	1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.4
Benzo[b]fluoranthene	ND	US	1.4	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	ND	US	1.3	4.2
Benzo[g,h,i]perylene	R ND		1.2	6.4
Carbazole	ND		0.74	3.9
Chrysene	R ND		1.3	5.8
Dibenz(a,h)anthracene	R ND		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.8
Fluorene	ND		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.6
Naphthalene	2.8	+ U	1.2	8.9
Perylene	R ND		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	3.2	J	1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	38		28 - 101
Naphthalene-d8 (Surr)	87		22 - 97

Dolly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W29

Lab Sample ID: 280-30514-3

Client Matrix: Water

Date Sampled: 06/27/2012 1005

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5317.D
Dilution:	1.0			Initial Weight/Volume:	3873.3 mL
Analysis Date:	07/24/2012 1425			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.76	J	0.70	5.6
2,3-Dihydroindene	5.3		0.72	5.2
1-Methylnaphthalene	6.8	B U	0.92	5.8
2-Methylnaphthalene	7.5	B U	1.0	6.1
Acenaphthene	13	B	0.52	5.9
Acenaphthylene	2.0	J	0.80	5.0
Acridine	ND	U S	6.7	6.7
Anthracene	3.8	J	0.83	4.3
Benzo[a]anthracene	1.2	J	0.95	4.4
Benzo[a]pyrene	ND	U S	1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.4
Benzo[b]fluoranthene	ND	U S	1.4	4.9
Benzo(b)thiophene	1.4	J	0.77	5.4
Benzo[k]fluoranthene	ND	U S	1.3	4.2
Benzo[g,h,i]perylene	R ND		1.2	6.4
Carbazole	ND		0.74	3.9
Chrysene	R ND		1.3	5.8
Dibenz(a,h)anthracene	R ND		1.1	6.1
Dibenzofuran	3.3	B U	1.0	5.9
Dibenzothiophene	3.0	J	1.0	4.2
Fluoranthene	21		1.7	4.8
Fluorene	14		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.6
Naphthalene	17	U	1.2	8.9
Perylene	R ND		3.9	3.9
Phenanthrene	7.6		3.3	6.5
Pyrene	17		1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	2.7	J	1.1	5.8
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	85	X	23 - 84	
Chrysene-d12 (Surr)	33		28 - 101	
Naphthalene-d8 (Surr)	87		22 - 97	

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W48

Lab Sample ID: 280-30514-4

Date Sampled: 06/27/2012 1045

Client Matrix: Water

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5318.D
Dilution:	1.0			Initial Weight/Volume:	3999.8 mL
Analysis Date:	07/24/2012 1501			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.84	J	0.68	5.4
2,3-Dihydroindene	3.9	J	0.70	5.0
1-Methylnaphthalene	2.2	J B U	0.89	5.6
2-Methylnaphthalene	1.8	J B U	0.98	5.9
Acenaphthene	60	B	0.50	5.7
Acenaphthylene	ND		0.77	4.8
Acridine	ND	J US	6.5	6.5
Anthracene	3.2	J	0.80	4.2
Benzo[a]anthracene	ND		0.92	4.3
Benzo[a]pyrene	ND		1.2	2.5
Benzo[e]pyrene	ND		1.1	4.3
Benzo[b]fluoranthene	ND		1.4	4.7
Benzo(b)thiophene	6.9		0.75	5.2
Benzo[k]fluoranthene	ND		1.2	4.4
Benzo[g,h,i]perylene	ND		1.2	6.2
Carbazole	0.90	J	0.72	3.8
Chrysene	ND		1.2	5.6
Dibenz(a,h)anthracene	ND		1.0	5.9
Dibenzofuran	ND		0.99	5.7
Dibenzothiophene	ND		0.98	4.1
Fluoranthene	ND		1.7	4.6
Fluorene	ND		0.85	4.1
Indene	24		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	ND		1.3	5.4
Naphthalene	5.5	J U	1.1	8.6
Perylene	ND		3.8	3.8
Phenanthrene	ND		3.2	6.3
Pyrene	1.2	J L	0.99	4.2
Quinoline	ND		5.7	9.0
Biphenyl	ND		1.1	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	50		23 - 84
Chrysene-d12 (Surr)	9	X	28 - 101
Naphthalene-d8 (Surr)	53		22 - 97

Polly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W119

Lab Sample ID: 280-30514-5

Client Matrix: Water

Date Sampled: 06/27/2012 1200

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5319.D
Dilution:	1.0			Initial Weight/Volume:	3642.5 mL
Analysis Date:	07/24/2012 1537			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.75	5.9
2,3-Dihydroindene	4.3	+ U	0.77	5.5
1-Methylnaphthalene	1.0	+ B U	0.98	6.1
2-Methylnaphthalene	ND		1.1	6.5
Acenaphthene	21	+ U	0.55	6.3
Acenaphthylene	2.5	+ U	0.85	5.3
Acridine	ND	+ U	7.1	7.1
Anthracene	3.0 3.9	+ U J	0.88	4.6
Benzo[a]anthracene	ND	U	1.0	4.7
Benzo[a]pyrene	ND	I	1.4	2.7
Benzo[e]pyrene	R ND		1.3	4.7
Benzo[b]fluoranthene	ND	U	1.5	5.2
Benzo(b)thiophene	5.4	+ U	0.82	5.7
Benzo[k]fluoranthene	ND	U	1.4	4.5
Benzo[g,h,i]perylene	R ND		1.3	6.8
Carbazole	1.6	J	0.79	4.2
Chrysene	R ND		1.4	6.1
Dibenz(a,h)anthracene	R ND		1.1	6.5
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.93	4.5
Indene	10	U	3.6	5.2
Indole	2.4	+ U	1.9	5.2
Indeno[1,2,3-cd]pyrene	R ND		1.4	5.9
Naphthalene	4.1	+ U	1.3	9.4
Perylene	ND		4.2	4.2
Phenanthrene	ND		3.5	6.9
Pyrene	11	J	1.1	4.6
Quinoline	ND		6.2	9.9
Biphenyl	ND		1.2	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	33		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

Gail S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W119D

Lab Sample ID: 280-30514-6FD

Date Sampled: 06/27/2012 1200

Client Matrix: Water

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5322.D
Dilution:	1.0			Initial Weight/Volume:	3835.1 mL
Analysis Date:	07/24/2012 1725			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.6
2,3-Dihydroindene	ND		0.73	5.2
1-Methylnaphthalene	ND		0.93	5.8
2-Methylnaphthalene	ND		1.0	6.2
Acenaphthene	0.89	JB US	0.52	5.9
Acenaphthylene	ND		0.80	5.0
Acridine	ND		6.8	6.8
Anthracene	2.3	US	0.83	4.4
Benzo[a]anthracene	ND	US	0.96	4.5
Benzo[a]pyrene	ND		1.3	2.6
Benzo[e]pyrene	ND		1.2	4.5
Benzo[b]fluoranthene	ND	US	1.4	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	ND	US	1.3	4.3
Benzo[g,h,i]perylene	ND		1.2	6.5
Carbazole	1.1	J	0.75	4.0
Chrysene	ND		1.3	5.8
Dibenz(a,h)anthracene	ND		1.1	6.2
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND		1.3	5.6
Naphthalene	ND		1.2	9.0
Perylene	ND		4.0	4.0
Phenanthrene	ND		3.3	6.0
Pyrene	7.0	J	1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	9	X	23 - 84
Chrysene-d12 (Surr)	32		28 - 101
Naphthalene-d8 (Surr)	0.7	X	22 - 97

Golly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W119FB

Lab Sample ID: 280-30514-7FB

Client Matrix: Water

Date Sampled: 06/27/2012 1200

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5323.D
Dilution:	1.0			Initial Weight/Volume:	3731.3 mL
Analysis Date:	07/24/2012 1801			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	ND		0.75	5.4
1-Methylnaphthalene	ND		0.95	6.0
2-Methylnaphthalene	ND		1.1	6.3
Acenaphthene	ND		0.54	6.1
Acenaphthylene	ND		0.83	5.1
Acridine	ND	US	7.0	7.0
Anthracene	ND		0.86	4.5
Benzo[a]anthracene	ND	US	0.99	4.6
Benzo[a]pyrene	ND	US	1.3	2.7
Benzo[e]pyrene	R ND	US	1.2	4.6
Benzo[b]fluoranthene	ND	US	1.5	5.0
Benzo(b)thiophene	ND		0.80	5.6
Benzo[k]fluoranthene	ND	US	1.3	4.4
Benzo[g,h,i]perylene	R ND		1.3	6.6
Carbazole	ND		0.77	4.1
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	ND		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.91	4.4
Indene	ND		3.5	5.0
Indole	ND		1.9	5.0
Indeno[1,2,3-cd]pyrene	R ND		1.4	5.8
Naphthalene	4.9	J	1.2	9.2
Perylene	R ND		4.1	4.1
Phenanthrene	ND		3.4	6.8
Pyrene	ND		1.1	4.5
Quinoline	ND		6.1	9.6
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	94		28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

Colly S. Newbold
2/26/2013

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30514-1

Client Sample ID: W403

Lab Sample ID: 280-30514-8

Date Sampled: 06/27/2012 1440

Client Matrix: Water

Date Received: 06/28/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129782	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126528	Lab File ID:	F5379.D
Dilution:	1.0			Initial Weight/Volume:	3831 mL
Analysis Date:	07/26/2012 1716			Final Weight/Volume:	1000 uL
Prep Date:	07/03/2012 1505			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.6
2,3-Dihydroindene	4.7	J U	0.73	5.2
1-Methylnaphthalene	3.2	J-B	0.93	5.8
2-Methylnaphthalene	6.8	B	1.0	6.2
Acenaphthene	0.78	J-B U	0.52	6.0
Acenaphthylene	5.1		0.80	5.0
Acridine	ND	UJ	6.8	6.8
Anthracene	4.9		0.84	4.4
Benzo[a]anthracene	29	L	0.96	4.5
Benzo[a]pyrene	26		1.3	2.6
Benzo[e]pyrene	19		1.2	4.5
Benzo[b]fluoranthene	46		1.5	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	ND		1.3	4.3
Benzo[g,h,i]perylene	16	L	1.2	6.5
Carbazole	2.0	J	0.75	4.0
Chrysene	29		1.3	5.8
Dibenz(a,h)anthracene	3.9	J	1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	44		1.8	4.8
Fluorene	1.4	J	0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	15	L	1.3	5.6
Naphthalene	17	U	1.2	9.0
Perylene	6.0	L	4.0	4.0
Phenanthrene	11		3.4	6.6
Pyrene	42	L	1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	66		23 - 84
Chrysene-d12 (Surr)	13	X	28 - 101
Naphthalene-d8 (Surr)	64		22 - 97

Colley S. Newbold
2/26/2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-30569-1

Client Project/Site: CSLP - Reilly Tar & Chemical

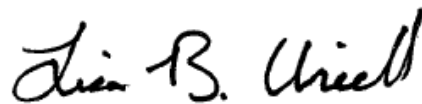
For:

Summit Envirosolutions Inc

1217 Bandana Blvd North

Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

7/30/2012 12:37:42 PM

Lisa Uriell

Project Manager II

lisa.uriell@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Job ID: 280-30569-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-30569-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

One sample was received under chain of custody on June 29, 2012. The sample was received at a temperature of 4.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, sample W402-062812 (280-30569-1) had an initial aliquot volume of 3915 mL. This is below the nominal aliquot volume of 4000 mL. Therefore, the analysis of this sample had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the initial volume available.

Surrogate Fluorene-d10 was recovered above the QC control limits (23-84%) in sample W48 W402-062812 (280-30569-1) at 87%. Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Low levels of 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene and Dibenzofuran are present in the method blank associated with prep batch 280-126528. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

The LCS associated with prep batch 280-126528 exhibited percent recoveries below the QC control limits for Acridine at 12% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 18% (limits 30-150%). 7,12-Dimethylbenz(a)anthracene is not a compound of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

The MS/MSD associated with prep batch 280-126528 was performed using a sample from another client and/or job. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits and 1 of the three surrogate recoveries outside the QC control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Job ID: 280-30569-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indeno[1,2,3-cd]pyrene	Perylene
Fluorene-d10		

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-30569-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	N/A	N/A
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	N/A	N/A
Sample Surrogates	3	2
Samples and QC Internal Standard Area	15	15
TOTAL	89	85
% Completeness	95.5%	

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Client Sample ID: W402-062812

Lab Sample ID: 280-30569-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	5.4		5.1	0.72	ng/L	1			8270C	Total/NA
1-Methylnaphthalene	3.6	J B	5.7	0.91	ng/L	1			8270C	Total/NA
2-Methylnaphthalene	8.7	B	6.0	1.0	ng/L	1			8270C	Total/NA
Naphthalene	19		8.8	1.2	ng/L	1			8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-30569-1	W402-062812	Water	06/28/12 15:05	06/29/12 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Client Sample ID: W402-062812

Lab Sample ID: 280-30569-1

Date Collected: 06/28/12 15:05

Matrix: Water

Date Received: 06/29/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.69	ng/L		07/03/12 15:05	07/24/12 19:13	1
2,3-Dihydroindene	5.4		5.1	0.72	ng/L		07/03/12 15:05	07/24/12 19:13	1
1-Methylnaphthalene	3.6	J B	5.7	0.91	ng/L		07/03/12 15:05	07/24/12 19:13	1
2-Methylnaphthalene	8.7	B	6.0	1.0	ng/L		07/03/12 15:05	07/24/12 19:13	1
Acenaphthene	ND		5.8	0.51	ng/L		07/03/12 15:05	07/24/12 19:13	1
Acenaphthylene	ND		4.9	0.79	ng/L		07/03/12 15:05	07/24/12 19:13	1
Acridine	ND	*	6.6	6.6	ng/L		07/03/12 15:05	07/24/12 19:13	1
Anthracene	ND		4.3	0.82	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[a]anthracene	ND		4.4	0.94	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[b]fluoranthene	ND		4.8	1.4	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo(b)thiophene	ND		5.3	0.77	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		07/03/12 15:05	07/24/12 19:13	1
Benzo[g,h,i]perylene	ND		6.3	1.2	ng/L		07/03/12 15:05	07/24/12 19:13	1
Carbazole	ND		3.9	0.74	ng/L		07/03/12 15:05	07/24/12 19:13	1
Chrysene	ND		5.7	1.3	ng/L		07/03/12 15:05	07/24/12 19:13	1
Dibenz(a,h)anthracene	ND		6.0	1.1	ng/L		07/03/12 15:05	07/24/12 19:13	1
Dibenzofuran	ND		5.8	1.0	ng/L		07/03/12 15:05	07/24/12 19:13	1
Dibenzothiophene	ND		4.2	1.0	ng/L		07/03/12 15:05	07/24/12 19:13	1
Fluoranthene	ND		4.7	1.7	ng/L		07/03/12 15:05	07/24/12 19:13	1
Fluorene	ND		4.2	0.87	ng/L		07/03/12 15:05	07/24/12 19:13	1
Indene	ND		4.8	3.4	ng/L		07/03/12 15:05	07/24/12 19:13	1
Indole	ND		4.8	1.8	ng/L		07/03/12 15:05	07/24/12 19:13	1
Indeno[1,2,3-cd]pyrene	ND		5.5	1.3	ng/L		07/03/12 15:05	07/24/12 19:13	1
Naphthalene	19		8.8	1.2	ng/L		07/03/12 15:05	07/24/12 19:13	1
Perylene	ND		3.9	3.9	ng/L		07/03/12 15:05	07/24/12 19:13	1
Phenanthrene	ND		6.4	3.3	ng/L		07/03/12 15:05	07/24/12 19:13	1
Pyrene	ND		4.3	1.0	ng/L		07/03/12 15:05	07/24/12 19:13	1
Quinoline	ND		9.2	5.8	ng/L		07/03/12 15:05	07/24/12 19:13	1
Biphenyl	ND		5.7	1.1	ng/L		07/03/12 15:05	07/24/12 19:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	X	23 - 84	07/03/12 15:05	07/24/12 19:13	1
Chrysene-d12 (Surr)	36		28 - 101	07/03/12 15:05	07/24/12 19:13	1
Naphthalene-d8 (Surr)	78		22 - 97	07/03/12 15:05	07/24/12 19:13	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-30569-1	W402-062812	87 X	36	78
LCS 280-126528/2-A	Lab Control Sample	81	96	89
MB 280-126528/1-A	Method Blank	73	88	83

Surrogate Legend

- FD10 = Fluorene-d10 (Surr)
- Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
- Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-126528/1-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 126528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		07/03/12 15:05	07/24/12 10:09	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		07/03/12 15:05	07/24/12 10:09	1
1-Methylnaphthalene	1.41	J	5.6	0.89	ng/L		07/03/12 15:05	07/24/12 10:09	1
2-Methylnaphthalene	1.83	J	5.9	0.98	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acenaphthene	1.10	J	5.7	0.50	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acenaphthylene	ND		4.8	0.77	ng/L		07/03/12 15:05	07/24/12 10:09	1
Acridine	ND		6.5	6.5	ng/L		07/03/12 15:05	07/24/12 10:09	1
Anthracene	ND		4.2	0.80	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Carbazole	ND		3.8	0.72	ng/L		07/03/12 15:05	07/24/12 10:09	1
Chrysene	ND		5.6	1.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenzofuran	1.64	J	5.7	0.99	ng/L		07/03/12 15:05	07/24/12 10:09	1
Dibenzothiophene	ND		4.1	0.98	ng/L		07/03/12 15:05	07/24/12 10:09	1
Fluoranthene	ND		4.6	1.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Fluorene	ND		4.1	0.85	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indene	ND		4.7	3.3	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indole	ND		4.7	1.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		07/03/12 15:05	07/24/12 10:09	1
Naphthalene	ND		8.6	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1
Perylene	ND		3.8	3.8	ng/L		07/03/12 15:05	07/24/12 10:09	1
Phenanthrene	ND		6.3	3.2	ng/L		07/03/12 15:05	07/24/12 10:09	1
Pyrene	ND		4.2	0.99	ng/L		07/03/12 15:05	07/24/12 10:09	1
Quinoline	ND		9.0	5.7	ng/L		07/03/12 15:05	07/24/12 10:09	1
Biphenyl	ND		5.6	1.1	ng/L		07/03/12 15:05	07/24/12 10:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	73		23 - 84	07/03/12 15:05	07/24/12 10:09	1
Chrysene-d12 (Surr)	88		28 - 101	07/03/12 15:05	07/24/12 10:09	1
Naphthalene-d8 (Surr)	83		22 - 97	07/03/12 15:05	07/24/12 10:09	1

Lab Sample ID: LCS 280-126528/2-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	63.8		ng/L		85	30 - 150
2,3-Dihydroindene	75.0	57.3		ng/L		76	30 - 150
1-Methylnaphthalene	75.0	64.8		ng/L		86	30 - 150
2-Methylnaphthalene	75.0	64.3		ng/L		86	25 - 95
3-Methylcholanthrene	75.0	39.1		ng/L		52	30 - 150
Acenaphthene	75.0	65.9		ng/L		88	30 - 150
Acenaphthylene	75.0	61.2		ng/L		82	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126528/2-A

Matrix: Water

Analysis Batch: 129495

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	9.17	*	ng/L		12	30 - 150
Anthracene	75.0	59.7		ng/L		80	30 - 150
Benzo[a]anthracene	75.0	58.9		ng/L		79	30 - 150
Benzo[a]pyrene	75.0	57.1		ng/L		76	30 - 150
Benzo[e]pyrene	75.0	67.4		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	60.9		ng/L		81	30 - 150
Benzo(b)thiophene	75.0	66.6		ng/L		89	30 - 150
Benzo[k]fluoranthene	75.0	72.5		ng/L		97	30 - 150
Benzo[g,h,i]perylene	75.0	64.3		ng/L		86	30 - 150
Carbazole	75.0	59.9		ng/L		80	30 - 150
Chrysene	75.0	74.5		ng/L		99	20 - 136
Dibenz(a,h)anthracene	75.0	67.5		ng/L		90	30 - 150
Dibenzofuran	75.0	66.0		ng/L		88	30 - 150
Dibenzothiophene	75.0	65.9		ng/L		88	30 - 150
Fluoranthene	75.0	56.8		ng/L		76	30 - 150
Fluorene	75.0	66.0		ng/L		88	34 - 96
Indene	75.0	60.8		ng/L		81	22 - 86
Indole	75.0	63.1		ng/L		84	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	65.8		ng/L		88	30 - 150
Naphthalene	75.0	65.2		ng/L		87	27 - 95
Perylene	75.0	71.8		ng/L		96	30 - 150
Phenanthrene	75.0	63.3		ng/L		84	30 - 150
Pyrene	75.0	51.4		ng/L		69	30 - 150
Quinoline	75.0	44.3		ng/L		59	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	13.2	*	ng/L		18	30 - 150
Biphenyl	75.0	66.1		ng/L		88	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	96		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

GC/MS Semi VOA

Prep Batch: 126528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30569-1	W402-062812	Total/NA	Water	3520C	
LCS 280-126528/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126528/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 129495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30569-1	W402-062812	Total/NA	Water	8270C	126528
LCS 280-126528/2-A	Lab Control Sample	Total/NA	Water	8270C	126528
MB 280-126528/1-A	Method Blank	Total/NA	Water	8270C	126528

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Client Sample ID: W402-062812
Date Collected: 06/28/12 15:05
Date Received: 06/29/12 09:30

Lab Sample ID: 280-30569-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3915 mL	1000 uL	126528	07/03/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			129495	07/24/12 19:13	KGV	TAL DEN

Laboratory References:
TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30569-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-12
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-31-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-12
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-12
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-12
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-12
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client	Summit Environmental Solutions	Project Manager	Bill Greedy	Date	6/25/12	Chain of Custody Number	T60961
Address	1177 Randonna Blvd N	Telephone Number (Area Code)/Fax Number	(651) 262-4236	Lab Number		Page	1 of 1

Project Name and Location (State)	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)	Special Instructions/
Project Name and Location (State)	City		Carrier/Waybill Number			
St. Paul Bailey Site (MN)	MN	55108	Bill Greag		6-23-11	

Contract/Purchase Order/Quote No. 0987-0009		Matrix	Containers & Preservatives	747 TS	Conditions of Receipt
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Possible Hazard Identification

☐ Possible
☐ Not Possible

Sample Disposal

☐ Yes
☒ No

(A fee may be assessed if samples are retained)

<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For _____ Months
						<input type="checkbox"/> Turn Around Time Required	
* QC Requirements (Specify)							* longer than 1 month)

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

1. Relinquished By	Date	Time	1. Received By	Date	Time
	06.08.10	10.45		06.08.10	10.45

	Date	Time	Signature	Time
2 Relinquisher (Bv)	6/28/12	18:13	<i>[Signature]</i>	09:50
2 Relinquisher (Bv)				09:50

Time	Date	Time	Date
2:10 PM	11/11/11	2:10 PM	11/11/11

3. Relinquished By	Date	Time	3. Received By	Date	Time

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Comments	#
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DISPOSITION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample: PINK - Field Copy
021270
05100X 2021

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-30569-1

Login Number: 30569

List Source: TestAmerica Denver

List Number: 1

Creator: Paulsen, Lindsay T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-30569-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2013

SLP/280-30569PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for one aqueous sample from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-30569-1 in a single data package. The following sample was reported:

W402-062812

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for 1-methylnaphthalene and 2-methylnaphthalene were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Results for acridine, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene were qualified as estimated (UJ), and results for benzo[g,h,i] perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene were qualified as rejected (R) for non-detects.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of June 28, 2012. The sample was shipped via Federal Express and received by the laboratory on June 29, 2012. The temperature of the cooler on receipt at the laboratory was noted on the COC and was acceptable (4.6° C; criteria 4.0° C \pm 2.0° C). The sample was extracted on July 3, 2012, which is within the 7-day holding time for aqueous samples and was analyzed on July 24, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "MSS_F". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. No documentation supporting either of the FC-43 tunes was present in the data package. The laboratory was contacted and indicated that the ***

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on July 20, 2012, for most of the target compounds. For three of the target compounds, the low level standard was omitted from the IC. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICVs contained only 21 of the 31 target compounds. No data were qualified on this basis.

B. Continuing Calibration (CC)

One CC was performed on July 24, 2012, in support of all the target compounds. All %D results were within the acceptance limits (35%) as defined in the QAPP.

IV. Blanks

One laboratory method blank was analyzed in support of this sample. The following target compounds were reported in the method blank:

<u>Compound</u>	<u>Amount Reported (ng/L)</u>
1-methylnaphthalene	1.41
2-methylnaphthalene	1.83
acenaphthene	1.10
dibenzofuran	1.64

Results for reported compounds less than five times the amount detected in the method blank are qualified as not detected at the analyte-specific reporting limit. Results for 1-methylnaphthalene and 2-methylnaphthalene in W402-062812 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to sample concentrations detected within five-times the concentration found in the method blank.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits except Fluorene-d₁₀ (87%R; criteria 23-84%R). No results were qualified based on the fluorene-d₁₀ excursion since the upper limit of the acceptance criteria is low and the percent recovery did not excessively exceed the limit.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample W119 (SDG# J30514). Percent recoveries (%R) and relative percent difference (RPD) values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo[a]anthracene			27	30-150 (25)	J/UJ
Benzo[a]pyrene	17	10	44	30-150 (25)	L/UJ
Benzo[e]pyrene	15	9	44	37-150 (25)	L/R
Benzo[b]fluoranthene	19	12	37	30-150 (25)	L/UJ
Benzo[k]fluoranthene	17	10	45	30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	3	41	30-150 (25)	L/R
Dibenz[a,h]anthracene	5	3	36	30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	4	43	30-150 (25)	L/R
Perylene	14	9	34	30-150 (25)	L/R

*based on amount recovered.

Results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene were qualified as estimated (UJ), and results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recoveries and/or high RPD values.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of acridine (12%R; criteria 30-150%R). The result for acridine was qualified as estimated (UJ) due to the unacceptable LCS recovery.

VII. Field Duplicate

No field duplicate pair was collected in association with this sample.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limits were equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".
- No ratios or spectra were included in the data package to support the identification of the reported compounds.

The issues discussed above affect the validity of the reported data, and may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for 1-methylnaphthalene and 2-methylnaphthalene were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to sample concentrations detected within five-times the concentration found in the method blank.
- Results for benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and benzo[k]fluoranthene were qualified as estimated (UJ), and results for benzo[g,h,i] perylene, dibenz[a,h]anthracene, benzo[e]pyrene, perylene, and indeno[1,2,3-cd]pyrene were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recovery and/or high RPD values.
- The result for acridine was qualified as estimated (UJ) due to an unacceptable LCS recovery.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ATTACHMENT A

**DATA SUMMARY FORMS
Laboratory Job No. 280-30569
PAHs in Water**

[illegible]

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS
Laboratory Job No. 280-30569
PAHs in Water

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-30569-1

Client Sample ID: W402-062812

Lab Sample ID: 280-30569-1

Client Matrix: Water

Date Sampled: 06/28/2012 1505

Date Received: 06/29/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method: 8270C

Prep Method: 3520C

Dilution: 1.0

Analysis Date: 07/24/2012 1913

Prep Date: 07/03/2012 1505

Analysis Batch: 280-129495

Prep Batch: 280-126528

Instrument ID: MSS_F

Lab File ID: F5325.D

Initial Weight/Volume: 3915 mL

Final Weight/Volume: 1000 uL

Injection Volume: 1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	5.4		0.72	5.1
1-Methylnaphthalene	3.6	JB U	0.91	5.7
2-Methylnaphthalene	8.7	B U	1.0	6.0
Acenaphthene	ND		0.51	5.8
Acenaphthylene	ND		0.79	4.9
Acridine	ND	U5	6.6	6.6
Anthracene	ND		0.82	4.3
Benzo[a]anthracene	ND	U5	0.94	4.4
Benzo[a]pyrene	ND	U5	1.3	2.6
Benzo[e]pyrene	R ND		1.2	4.4
Benzo[b]fluoranthene	ND	U5	1.4	4.8
Benzo(b)thiophene	ND		0.77	5.3
Benzo[k]fluoranthene	ND	U5	1.3	4.2
Benzo[g,h,i]perylene	R ND		1.2	6.3
Carbazole	ND		0.74	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	R ND		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	ND		3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	R ND		1.3	5.5
Naphthalene	19		1.2	8.8
Perylene	R ND		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	ND		1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	87	X	23 - 84	
Chrysene-d12 (Surr)	36		28 - 101	
Naphthalene-d8 (Surr)	78		22 - 97	

Doyle L. Newbold
2/26/2013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-31689-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

1217 Bandana Blvd North

Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

8/22/2012 8:46:22 AM

Lisa Uriell

Project Manager II

lisa.uriell@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Job ID: 280-31689-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-31689-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Three samples were received under chain of custody on August 1, 2012. The samples were received at temperatures of 4.6°C, 5.6°C, 5.8°C and 4.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

The surrogates listed below were recovered outside the QC control limits in the following samples, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

E13-073112 (280-31689-1) recovered Chrysene-d12 at 17% (limits 28-101%)

E13D-073112 (280-31689-2) recovered Chrysene-d12 at 16% (limits 28-101%)

Low levels of 1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene are present in the method blank associated with prep batch 280-130801. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

The MS/MSD associated with prep batch 280-130801 was performed using sample E13-073112 (280-31689-1), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 11 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited 3 of the 33 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Acenaphthene	Benzo[a]anthracene
Benzo[a]pyrene	Benzo[e]pyrene	Benzo[b]fluoranthene
Benzo[k]fluoranthene	Benzo[ghi]perylene	Carbazole
Dibenzo(a,h)anthracene	Indole	Indeno[1,2,3-cd]pyrene
Perylene		

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Job ID: 280-31689-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

No other anomalies were noted.

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Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-31689-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	28
Sample Surrogates	9	7
Samples and QC Internal Standard Area	21	21
TOTAL	163	156
% Completeness	95.7%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-31689-1					
Sample: E13-073112		DUP: E13D-073112			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	110	Acenaphthene	100	9.5	
Acenaphthylene	9.8	Acenaphthylene	9.2	6.3	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	1.3	NC	
Dibenzothiophene	2.7	Dibenzothiophene	2.5	7.7	
2,3-Dihydroindene	6.8	2,3-Dihydroindene	5.8	15.9	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	0.99	NC	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	4.4	2-Methylnaphthalene	1.8	83.9	p
1-Methylnaphthalene	4.0	1-Methylnaphthalene	1.8	75.9	p
Naphthalene	8.1	Naphthalene	3.0	91.9	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	7.6	Pyrene	6.9	9.7	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Client Sample ID: E13-073112

Lab Sample ID: 280-31689-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	6.8		4.7	0.66	ng/L			1	8270C	Total/NA
1-Methylnaphthalene	4.0	J B	5.3	0.84	ng/L			1	8270C	Total/NA
2-Methylnaphthalene	4.4	J B	5.6	0.93	ng/L			1	8270C	Total/NA
Acenaphthene	110		5.4	0.47	ng/L			1	8270C	Total/NA
Acenaphthylene	9.8		4.5	0.73	ng/L			1	8270C	Total/NA
Dibenzothiophene	2.7	J	3.9	0.93	ng/L			1	8270C	Total/NA
Naphthalene	8.1	B	8.1	1.1	ng/L			1	8270C	Total/NA
Pyrene	7.6		4.0	0.94	ng/L			1	8270C	Total/NA

Client Sample ID: E13D-073112

Lab Sample ID: 280-31689-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	5.8		4.8	0.67	ng/L			1	8270C	Total/NA
1-Methylnaphthalene	1.8	J B	5.3	0.85	ng/L			1	8270C	Total/NA
2-Methylnaphthalene	1.8	J B	5.6	0.93	ng/L			1	8270C	Total/NA
Acenaphthene	100		5.4	0.48	ng/L			1	8270C	Total/NA
Acenaphthylene	9.2		4.6	0.73	ng/L			1	8270C	Total/NA
Dibenzofuran	1.3	J	5.4	0.94	ng/L			1	8270C	Total/NA
Dibenzothiophene	2.5	J	3.9	0.93	ng/L			1	8270C	Total/NA
Fluorene	0.99	J	3.9	0.81	ng/L			1	8270C	Total/NA
Naphthalene	3.0	J B	8.2	1.1	ng/L			1	8270C	Total/NA
Pyrene	6.9		4.0	0.94	ng/L			1	8270C	Total/NA

Client Sample ID: E13FB-073112

Lab Sample ID: 280-31689-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	0.99	J	4.7	0.66	ng/L			1	8270C	Total/NA
2-Methylnaphthalene	1.2	J B	5.6	0.93	ng/L			1	8270C	Total/NA
Naphthalene	3.2	J B	8.2	1.1	ng/L			1	8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-31689-1	E13-073112	Water	07/31/12 10:00	08/01/12 09:00
280-31689-2	E13D-073112	Water	07/31/12 10:00	08/01/12 09:00
280-31689-3	E13FB-073112	Water	07/31/12 10:00	08/01/12 09:00

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Client Sample ID: E13-073112

Lab Sample ID: 280-31689-1

Date Collected: 07/31/12 10:00

Matrix: Water

Date Received: 08/01/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.1	0.64	ng/L		08/04/12 12:55	08/16/12 17:40	1
2,3-Dihydroindene	6.8		4.7	0.66	ng/L		08/04/12 12:55	08/16/12 17:40	1
1-Methylnaphthalene	4.0	J B	5.3	0.84	ng/L		08/04/12 12:55	08/16/12 17:40	1
2-Methylnaphthalene	4.4	J B	5.6	0.93	ng/L		08/04/12 12:55	08/16/12 17:40	1
Acenaphthene	110		5.4	0.47	ng/L		08/04/12 12:55	08/16/12 17:40	1
Acenaphthylene	9.8		4.5	0.73	ng/L		08/04/12 12:55	08/16/12 17:40	1
Acridine	ND		6.2	6.2	ng/L		08/04/12 12:55	08/16/12 17:40	1
Anthracene	ND		4.0	0.76	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[a]anthracene	ND		4.1	0.87	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[a]pyrene	ND		2.4	1.2	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[e]pyrene	ND		4.1	1.1	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[b]fluoranthene	ND		4.5	1.3	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo(b)thiophene	ND		4.9	0.71	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[k]fluoranthene	ND		3.9	1.2	ng/L		08/04/12 12:55	08/16/12 17:40	1
Benzo[g,h,i]perylene	ND		5.9	1.1	ng/L		08/04/12 12:55	08/16/12 17:40	1
Carbazole	ND		3.6	0.68	ng/L		08/04/12 12:55	08/16/12 17:40	1
Chrysene	ND		5.3	1.2	ng/L		08/04/12 12:55	08/16/12 17:40	1
Dibenz(a,h)anthracene	ND		5.6	0.98	ng/L		08/04/12 12:55	08/16/12 17:40	1
Dibenzofuran	ND		5.4	0.94	ng/L		08/04/12 12:55	08/16/12 17:40	1
Dibenzothiophene	2.7	J	3.9	0.93	ng/L		08/04/12 12:55	08/16/12 17:40	1
Fluoranthene	ND		4.4	1.6	ng/L		08/04/12 12:55	08/16/12 17:40	1
Fluorene	ND		3.9	0.80	ng/L		08/04/12 12:55	08/16/12 17:40	1
Indene	ND		4.5	3.1	ng/L		08/04/12 12:55	08/16/12 17:40	1
Indole	ND		4.5	1.6	ng/L		08/04/12 12:55	08/16/12 17:40	1
Indeno[1,2,3-cd]pyrene	ND		5.1	1.2	ng/L		08/04/12 12:55	08/16/12 17:40	1
Naphthalene	8.1	B	8.1	1.1	ng/L		08/04/12 12:55	08/16/12 17:40	1
Perylene	ND		3.6	3.6	ng/L		08/04/12 12:55	08/16/12 17:40	1
Phenanthrene	ND		6.0	3.0	ng/L		08/04/12 12:55	08/16/12 17:40	1
Pyrene	7.6		4.0	0.94	ng/L		08/04/12 12:55	08/16/12 17:40	1
Quinoline	ND		8.5	5.3	ng/L		08/04/12 12:55	08/16/12 17:40	1
Biphenyl	ND		5.3	0.99	ng/L		08/04/12 12:55	08/16/12 17:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	75		23 - 84	08/04/12 12:55	08/16/12 17:40	1
Chrysene-d12 (Surr)	17	X	28 - 101	08/04/12 12:55	08/16/12 17:40	1
Naphthalene-d8 (Surr)	82		22 - 97	08/04/12 12:55	08/16/12 17:40	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Client Sample ID: E13D-073112

Lab Sample ID: 280-31689-2

Date Collected: 07/31/12 10:00

Matrix: Water

Date Received: 08/01/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.2	0.65	ng/L		08/04/12 12:55	08/16/12 19:24	1
2,3-Dihydroindene	5.8		4.8	0.67	ng/L		08/04/12 12:55	08/16/12 19:24	1
1-Methylnaphthalene	1.8	J B	5.3	0.85	ng/L		08/04/12 12:55	08/16/12 19:24	1
2-Methylnaphthalene	1.8	J B	5.6	0.93	ng/L		08/04/12 12:55	08/16/12 19:24	1
Acenaphthene	100		5.4	0.48	ng/L		08/04/12 12:55	08/16/12 19:24	1
Acenaphthylene	9.2		4.6	0.73	ng/L		08/04/12 12:55	08/16/12 19:24	1
Acridine	ND		6.2	6.2	ng/L		08/04/12 12:55	08/16/12 19:24	1
Anthracene	ND		4.0	0.76	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[a]anthracene	ND		4.1	0.88	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[a]pyrene	ND		2.4	1.2	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[e]pyrene	ND		4.1	1.1	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[b]fluoranthene	ND		4.5	1.3	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo(b)thiophene	ND		5.0	0.72	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[k]fluoranthene	ND		3.9	1.2	ng/L		08/04/12 12:55	08/16/12 19:24	1
Benzo[g,h,i]perylene	ND		5.9	1.1	ng/L		08/04/12 12:55	08/16/12 19:24	1
Carbazole	ND		3.6	0.69	ng/L		08/04/12 12:55	08/16/12 19:24	1
Chrysene	ND		5.3	1.2	ng/L		08/04/12 12:55	08/16/12 19:24	1
Dibenz(a,h)anthracene	ND		5.6	0.99	ng/L		08/04/12 12:55	08/16/12 19:24	1
Dibenzofuran	1.3	J	5.4	0.94	ng/L		08/04/12 12:55	08/16/12 19:24	1
Dibenzothiophene	2.5	J	3.9	0.93	ng/L		08/04/12 12:55	08/16/12 19:24	1
Fluoranthene	ND		4.4	1.6	ng/L		08/04/12 12:55	08/16/12 19:24	1
Fluorene	0.99	J	3.9	0.81	ng/L		08/04/12 12:55	08/16/12 19:24	1
Indene	ND		4.5	3.1	ng/L		08/04/12 12:55	08/16/12 19:24	1
Indole	ND		4.5	1.7	ng/L		08/04/12 12:55	08/16/12 19:24	1
Indeno[1,2,3-cd]pyrene	ND		5.2	1.2	ng/L		08/04/12 12:55	08/16/12 19:24	1
Naphthalene	3.0	J B	8.2	1.1	ng/L		08/04/12 12:55	08/16/12 19:24	1
Perylene	ND		3.6	3.6	ng/L		08/04/12 12:55	08/16/12 19:24	1
Phenanthrene	ND		6.0	3.1	ng/L		08/04/12 12:55	08/16/12 19:24	1
Pyrene	6.9		4.0	0.94	ng/L		08/04/12 12:55	08/16/12 19:24	1
Quinoline	ND		8.6	5.4	ng/L		08/04/12 12:55	08/16/12 19:24	1
Biphenyl	ND		5.3	1.0	ng/L		08/04/12 12:55	08/16/12 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	68		23 - 84	08/04/12 12:55	08/16/12 19:24	1
Chrysene-d12 (Surr)	16	X	28 - 101	08/04/12 12:55	08/16/12 19:24	1
Naphthalene-d8 (Surr)	73		22 - 97	08/04/12 12:55	08/16/12 19:24	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Client Sample ID: E13FB-073112

Lab Sample ID: 280-31689-3

Date Collected: 07/31/12 10:00

Matrix: Water

Date Received: 08/01/12 09:00

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.1	0.64	ng/L		08/04/12 12:55	08/16/12 19:58	1
2,3-Dihydroindene	0.99	J	4.7	0.66	ng/L		08/04/12 12:55	08/16/12 19:58	1
1-Methylnaphthalene	ND		5.3	0.84	ng/L		08/04/12 12:55	08/16/12 19:58	1
2-Methylnaphthalene	1.2	J B	5.6	0.93	ng/L		08/04/12 12:55	08/16/12 19:58	1
Acenaphthene	ND		5.4	0.47	ng/L		08/04/12 12:55	08/16/12 19:58	1
Acenaphthylene	ND		4.5	0.73	ng/L		08/04/12 12:55	08/16/12 19:58	1
Acridine	ND		6.2	6.2	ng/L		08/04/12 12:55	08/16/12 19:58	1
Anthracene	ND		4.0	0.76	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[a]anthracene	ND		4.1	0.87	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[a]pyrene	ND		2.4	1.2	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[e]pyrene	ND		4.1	1.1	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[b]fluoranthene	ND		4.5	1.3	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo(b)thiophene	ND		4.9	0.71	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[k]fluoranthene	ND		3.9	1.2	ng/L		08/04/12 12:55	08/16/12 19:58	1
Benzo[g,h,i]perylene	ND		5.9	1.1	ng/L		08/04/12 12:55	08/16/12 19:58	1
Carbazole	ND		3.6	0.68	ng/L		08/04/12 12:55	08/16/12 19:58	1
Chrysene	ND		5.3	1.2	ng/L		08/04/12 12:55	08/16/12 19:58	1
Dibenz(a,h)anthracene	ND		5.6	0.99	ng/L		08/04/12 12:55	08/16/12 19:58	1
Dibenzofuran	ND		5.4	0.94	ng/L		08/04/12 12:55	08/16/12 19:58	1
Dibenzothiophene	ND		3.9	0.93	ng/L		08/04/12 12:55	08/16/12 19:58	1
Fluoranthene	ND		4.4	1.6	ng/L		08/04/12 12:55	08/16/12 19:58	1
Fluorene	ND		3.9	0.81	ng/L		08/04/12 12:55	08/16/12 19:58	1
Indene	ND		4.5	3.1	ng/L		08/04/12 12:55	08/16/12 19:58	1
Indole	ND		4.5	1.6	ng/L		08/04/12 12:55	08/16/12 19:58	1
Indeno[1,2,3-cd]pyrene	ND		5.1	1.2	ng/L		08/04/12 12:55	08/16/12 19:58	1
Naphthalene	3.2	J B	8.2	1.1	ng/L		08/04/12 12:55	08/16/12 19:58	1
Perylene	ND		3.6	3.6	ng/L		08/04/12 12:55	08/16/12 19:58	1
Phenanthrene	ND		6.0	3.0	ng/L		08/04/12 12:55	08/16/12 19:58	1
Pyrene	ND		4.0	0.94	ng/L		08/04/12 12:55	08/16/12 19:58	1
Quinoline	ND		8.5	5.4	ng/L		08/04/12 12:55	08/16/12 19:58	1
Biphenyl	ND		5.3	1.0	ng/L		08/04/12 12:55	08/16/12 19:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	08/04/12 12:55	08/16/12 19:58	1
Chrysene-d12 (Surr)	93		28 - 101	08/04/12 12:55	08/16/12 19:58	1
Naphthalene-d8 (Surr)	83		22 - 97	08/04/12 12:55	08/16/12 19:58	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-31689-1	E13-073112	75	17 X	82
280-31689-1 MS	E13-073112	78	33	81
280-31689-1 MSD	E13-073112	47	28	59
280-31689-2	E13D-073112	68	16 X	73
280-31689-3	E13FB-073112	81	93	83
LCS 280-130801/2-A	Lab Control Sample	62	77	69
MB 280-130801/1-A	Method Blank	79	90	83

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-130801/1-A

Matrix: Water

Analysis Batch: 132830

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 130801

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		08/04/12 12:55	08/16/12 16:31	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		08/04/12 12:55	08/16/12 16:31	1
1-Methylnaphthalene	1.45	J	5.6	0.89	ng/L		08/04/12 12:55	08/16/12 16:31	1
2-Methylnaphthalene	1.79	J	5.9	0.98	ng/L		08/04/12 12:55	08/16/12 16:31	1
Acenaphthene	ND		5.7	0.50	ng/L		08/04/12 12:55	08/16/12 16:31	1
Acenaphthylene	ND		4.8	0.77	ng/L		08/04/12 12:55	08/16/12 16:31	1
Acridine	ND		6.5	6.5	ng/L		08/04/12 12:55	08/16/12 16:31	1
Anthracene	ND		4.2	0.80	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		08/04/12 12:55	08/16/12 16:31	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		08/04/12 12:55	08/16/12 16:31	1
Carbazole	ND		3.8	0.72	ng/L		08/04/12 12:55	08/16/12 16:31	1
Chrysene	ND		5.6	1.2	ng/L		08/04/12 12:55	08/16/12 16:31	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		08/04/12 12:55	08/16/12 16:31	1
Dibenzofuran	ND		5.7	0.99	ng/L		08/04/12 12:55	08/16/12 16:31	1
Dibenzothiophene	ND		4.1	0.98	ng/L		08/04/12 12:55	08/16/12 16:31	1
Fluoranthene	ND		4.6	1.7	ng/L		08/04/12 12:55	08/16/12 16:31	1
Fluorene	ND		4.1	0.85	ng/L		08/04/12 12:55	08/16/12 16:31	1
Indene	ND		4.7	3.3	ng/L		08/04/12 12:55	08/16/12 16:31	1
Indole	ND		4.7	1.7	ng/L		08/04/12 12:55	08/16/12 16:31	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		08/04/12 12:55	08/16/12 16:31	1
Naphthalene	3.65	J	8.6	1.1	ng/L		08/04/12 12:55	08/16/12 16:31	1
Perylene	ND		3.8	3.8	ng/L		08/04/12 12:55	08/16/12 16:31	1
Phenanthrene	ND		6.3	3.2	ng/L		08/04/12 12:55	08/16/12 16:31	1
Pyrene	ND		4.2	0.99	ng/L		08/04/12 12:55	08/16/12 16:31	1
Quinoline	ND		9.0	5.7	ng/L		08/04/12 12:55	08/16/12 16:31	1
Biphenyl	ND		5.6	1.1	ng/L		08/04/12 12:55	08/16/12 16:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	79		23 - 84	08/04/12 12:55	08/16/12 16:31	1
Chrysene-d12 (Surr)	90		28 - 101	08/04/12 12:55	08/16/12 16:31	1
Naphthalene-d8 (Surr)	83		22 - 97	08/04/12 12:55	08/16/12 16:31	1

Lab Sample ID: LCS 280-130801/2-A

Matrix: Water

Analysis Batch: 132830

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	51.7		ng/L		69	30 - 150
2,3-Dihydroindene	75.0	49.6		ng/L		66	30 - 150
1-Methylnaphthalene	75.0	52.5		ng/L		70	30 - 150
2-Methylnaphthalene	75.0	53.0		ng/L		71	25 - 95
3-Methylcholanthrene	75.0	35.3		ng/L		47	30 - 150
Acenaphthene	75.0	50.3		ng/L		67	30 - 150
Acenaphthylene	75.0	47.4		ng/L		63	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-130801/2-A

Matrix: Water

Analysis Batch: 132830

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	22.9		ng/L		30	30 - 150
Anthracene	75.0	49.6		ng/L		66	30 - 150
Benzo[a]anthracene	75.0	52.9		ng/L		71	30 - 150
Benzo[a]pyrene	75.0	49.9		ng/L		67	30 - 150
Benzo[e]pyrene	75.0	53.2		ng/L		71	37 - 105
Benzo[b]fluoranthene	75.0	52.1		ng/L		69	30 - 150
Benzo(b)thiophene	75.0	52.0		ng/L		69	30 - 150
Benzo[k]fluoranthene	75.0	53.0		ng/L		71	30 - 150
Benzo[g,h,i]perylene	75.0	44.5		ng/L		59	30 - 150
Carbazole	75.0	51.7		ng/L		69	30 - 150
Chrysene	75.0	57.8		ng/L		77	20 - 136
Dibenz(a,h)anthracene	75.0	42.2		ng/L		56	30 - 150
Dibenzofuran	75.0	51.1		ng/L		68	30 - 150
Dibenzothiophene	75.0	52.0		ng/L		69	30 - 150
Fluoranthene	75.0	54.0		ng/L		72	30 - 150
Fluorene	75.0	50.0		ng/L		67	34 - 96
Indene	75.0	50.1		ng/L		67	22 - 86
Indole	75.0	46.8		ng/L		62	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	43.2		ng/L		58	30 - 150
Naphthalene	75.0	52.9		ng/L		71	27 - 95
Perylene	75.0	48.9		ng/L		65	30 - 150
Phenanthrene	75.0	52.1		ng/L		70	30 - 150
Pyrene	75.0	53.8		ng/L		72	30 - 150
Quinoline	75.0	37.5		ng/L		50	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	28.1		ng/L		37	30 - 150
Biphenyl	75.0	48.7		ng/L		65	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	62		23 - 84
Chrysene-d12 (Surr)	77		28 - 101
Naphthalene-d8 (Surr)	69		22 - 97

Lab Sample ID: 280-31689-1 MS

Matrix: Water

Analysis Batch: 132830

Client Sample ID: E13-073112

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		71.3	58.0		ng/L		81	30 - 150
2,3-Dihydroindene	6.8		71.3	61.7		ng/L		77	30 - 150
1-Methylnaphthalene	4.0	J B	71.3	57.9		ng/L		76	30 - 150
2-Methylnaphthalene	4.4	J B	71.3	57.8		ng/L		75	25 - 95
3-Methylcholanthrene	ND		71.3	5.48	F	ng/L		8	30 - 150
Acenaphthene	110		71.3	172		ng/L		82	30 - 150
Acenaphthylene	9.8		71.3	67.2		ng/L		80	30 - 150
Acridine	ND		71.3	68.9		ng/L		97	30 - 150
Anthracene	ND		71.3	61.8		ng/L		87	30 - 150
Benzo[a]anthracene	ND		71.3	21.5		ng/L		30	30 - 150
Benzo[a]pyrene	ND		71.3	5.25	F	ng/L		7	30 - 150
Benzo[e]pyrene	ND		71.3	5.64	F	ng/L		8	37 - 105

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-31689-1 MS

Matrix: Water

Analysis Batch: 132830

Client Sample ID: E13-073112

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	ND		71.3	7.27	F	ng/L		10	30 - 150
Benzo(b)thiophene	ND		71.3	58.0		ng/L		81	30 - 150
Benzo[k]fluoranthene	ND		71.3	6.15	F	ng/L		9	30 - 150
Benzo[g,h,i]perylene	ND		71.3	2.75	J F	ng/L		4	30 - 150
Carbazole	ND		71.3	64.4		ng/L		90	30 - 150
Chrysene	ND		71.3	22.6		ng/L		32	20 - 136
Dibenz(a,h)anthracene	ND		71.3	2.79	J F	ng/L		4	30 - 150
Dibenzofuran	ND		71.3	59.6		ng/L		84	30 - 150
Dibenzothiophene	2.7	J	71.3	62.5		ng/L		84	30 - 150
Fluoranthene	ND		71.3	53.9		ng/L		76	30 - 150
Fluorene	ND		71.3	57.2		ng/L		80	34 - 96
Indene	ND		71.3	56.6		ng/L		79	22 - 86
Indole	ND		71.3	58.5		ng/L		82	30 - 150
Indeno[1,2,3-cd]pyrene	ND		71.3	2.91	J F	ng/L		4	30 - 150
Naphthalene	8.1	B	71.3	59.7		ng/L		72	27 - 95
Perylene	ND		71.3	5.84	F	ng/L		8	30 - 150
Phenanthrene	ND		71.3	59.6		ng/L		84	30 - 150
Pyrene	7.6		71.3	63.0		ng/L		78	30 - 150
Quinoline	ND		71.3	57.3		ng/L		80	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		71.3	41.8		ng/L		59	30 - 150
Biphenyl	ND		71.3	55.7		ng/L		78	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	78		23 - 84
Chrysene-d12 (Surr)	33		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

Lab Sample ID: 280-31689-1 MSD

Matrix: Water

Analysis Batch: 132830

Client Sample ID: E13-073112

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	ND		71.1	42.0		ng/L		59	30 - 150	32	50
2,3-Dihydroindene	6.8		71.1	44.3		ng/L		53	30 - 150	33	50
1-Methylnaphthalene	4.0	J B	71.1	41.7		ng/L		53	30 - 150	32	50
2-Methylnaphthalene	4.4	J B	71.1	41.8		ng/L		53	25 - 95	32	50
3-Methylcholanthrene	ND		71.1	5.01	F	ng/L		7	30 - 150	9	50
Acenaphthene	110		71.1	124	F	ng/L		14	30 - 150	32	50
Acenaphthylene	9.8		71.1	48.2		ng/L		54	30 - 150	33	50
Acridine	ND		71.1	44.0		ng/L		62	30 - 150	44	50
Anthracene	ND		71.1	42.9		ng/L		60	30 - 150	36	50
Benzo[a]anthracene	ND		71.1	18.6	F	ng/L		26	30 - 150	15	50
Benzo[a]pyrene	ND		71.1	4.63	F	ng/L		7	30 - 150	13	50
Benzo[e]pyrene	ND		71.1	5.63	F	ng/L		8	37 - 105	0	50
Benzo[b]fluoranthene	ND		71.1	6.71	F	ng/L		9	30 - 150	8	50
Benzo(b)thiophene	ND		71.1	41.3		ng/L		58	30 - 150	34	50
Benzo[k]fluoranthene	ND		71.1	5.27	F	ng/L		7	30 - 150	15	50
Benzo[g,h,i]perylene	ND		71.1	1.95	J F	ng/L		3	30 - 150	34	50
Carbazole	ND		71.1	24.0	F	ng/L		34	30 - 150	91	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-31689-1 MSD

Matrix: Water

Analysis Batch: 132830

Client Sample ID: E13-073112

Prep Type: Total/NA

Prep Batch: 130801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		71.1	19.7		ng/L		28	20 - 136	14	50
Dibenz(a,h)anthracene	ND		71.1	1.54	J F	ng/L		2	30 - 150	57	50
Dibenzofuran	ND		71.1	42.6		ng/L		60	30 - 150	33	50
Dibenzothiophene	2.7	J	71.1	44.7		ng/L		59	30 - 150	33	50
Fluoranthene	ND		71.1	40.5		ng/L		57	30 - 150	28	50
Fluorene	ND		71.1	40.6		ng/L		57	34 - 96	34	50
Indene	ND		71.1	40.0		ng/L		56	22 - 86	34	50
Indole	ND		71.1	30.5	F	ng/L		43	30 - 150	63	50
Indeno[1,2,3-cd]pyrene	ND		71.1	1.80	J F	ng/L		3	30 - 150	47	50
Naphthalene	8.1	B	71.1	43.2		ng/L		49	27 - 95	32	50
Perylene	ND		71.1	5.93	F	ng/L		8	30 - 150	2	50
Phenanthrene	ND		71.1	43.0		ng/L		61	30 - 150	32	50
Pyrene	7.6		71.1	47.5		ng/L		56	30 - 150	28	50
Quinoline	ND		71.1	42.3		ng/L		59	20 - 112	30	50
7,12-Dimethylbenz(a)anthracene	ND		71.1	32.0		ng/L		45	30 - 150	27	50
Biphenyl	ND		71.1	40.9		ng/L		57	30 - 150	31	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	47		23 - 84
Chrysene-d12 (Surr)	28		28 - 101
Naphthalene-d8 (Surr)	59		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

GC/MS Semi VOA

Prep Batch: 130801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-31689-1	E13-073112	Total/NA	Water	3520C	
280-31689-1 MS	E13-073112	Total/NA	Water	3520C	
280-31689-1 MSD	E13-073112	Total/NA	Water	3520C	
280-31689-2	E13D-073112	Total/NA	Water	3520C	
280-31689-3	E13FB-073112	Total/NA	Water	3520C	
LCS 280-130801/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-130801/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 132830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-31689-1	E13-073112	Total/NA	Water	8270C	130801
280-31689-1 MS	E13-073112	Total/NA	Water	8270C	130801
280-31689-1 MSD	E13-073112	Total/NA	Water	8270C	130801
280-31689-2	E13D-073112	Total/NA	Water	8270C	130801
280-31689-3	E13FB-073112	Total/NA	Water	8270C	130801
LCS 280-130801/2-A	Lab Control Sample	Total/NA	Water	8270C	130801
MB 280-130801/1-A	Method Blank	Total/NA	Water	8270C	130801

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Client Sample ID: E13-073112

Date Collected: 07/31/12 10:00

Date Received: 08/01/12 09:00

Lab Sample ID: 280-31689-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			130801	08/04/12 12:55	JJW	TAL DEN
Total/NA	Analysis	8270C		1	132830	08/16/12 17:40	KGV	TAL DEN

Client Sample ID: E13D-073112

Date Collected: 07/31/12 10:00

Date Received: 08/01/12 09:00

Lab Sample ID: 280-31689-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			130801	08/04/12 12:55	JJW	TAL DEN
Total/NA	Analysis	8270C		1	132830	08/16/12 19:24	KGV	TAL DEN

Client Sample ID: E13FB-073112

Date Collected: 07/31/12 10:00

Date Received: 08/01/12 09:00

Lab Sample ID: 280-31689-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			130801	08/04/12 12:55	JJW	TAL DEN
Total/NA	Analysis	8270C		1	132830	08/16/12 19:58	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-31689-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	09-30-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-13
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-13
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID

Temperature on Receipt

Drinking Water? Yes ☐ No ☐

Client

Address

City

Project Name and Location (State)

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description
(Containers for each sample may be combined on one line)

Date

Time

Matrix

Containers & Preservatives

Site Contact

Lab Contact

Carrier/Waybill Number

Analysis (Attach list if more space is needed)

Chain of Custody Number

Page of

Special Instructions/
Conditions of Receipt

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months ☐ Longer than 1 month

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other

1. Relinquished By

2. Relinquished By

3. Relinquished By

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-31689-1

Login Number: 31689

List Source: TestAmerica Denver

List Number: 1

Creator: Cofoid, Stephen T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Analyses listed on COC; individual samples not designated for specific analyses
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA**

**ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-31689-1**

Analyses Performed

By:

**Test America Denver
Arvada, Colorado**

For:

**Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108**

Data Validation By:

**ddms, inc.
St. Paul, Minnesota**

February 27, 2013

Reilly\280-31689-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for two aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-35162-1 in a single data package. The following samples were reported:

E13-073112	E13D-073112	E13FB-073112
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Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for 1-methylnaphthalene, 2-methylnaphthalene and naphthalene in E13-073112 and E13D-073112 and 2-methylnaphthalene and naphthalene in E13FB-073112 were qualified as not detected (U) at the Reporting Limit (RL).
- Results for dibenzofuran and fluorene in E13D-073112 were qualified as not detected (U) at the analyte-specific RL.
- Results in all field samples for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, carbazole, dibenz[a,h]anthracene, ideno[1,2,3,cd]pyrene and perylene were qualified as rejected (R).
- Results for 2,3-benzofuran, 2,3-dihydroindene, 1-methylnaphthalene, acenaphthene, acenaphthylene, acridine, anthracene, benzo[a]anthracene, benzo[b]thiophene, dibenzofuran, dibenzothiophene, fluoranthene, fluorene, indene, indole, phenanthrene, pyrene, quinoline and biphenyl were qualified as estimated (L, UJ) in all field samples.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of July 31, 2012. The samples were received by the laboratory on August 1, 2012. The temperature of the coolers on receipt at the laboratory was noted on the COC and was acceptable (4.6° C to 5.8° C; criteria 4.0° C \pm 2.0° C). All samples were extracted on August 4, 2012 which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on August 16, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". There is no documentation of a perfluorotributylamine (FC-43) instrument performance check having been run in association with these samples. The laboratory was contacted and stated: Due to an oversight this piece of data was not scanned. This cannot be recreated from the instrument because the FC-43 tune is overwritten every time it is acquired. It is lab practice to scan these into the laboratory data package. The hardcopies are only kept for a short time and the lab just recently disposed of the files associated with this job. This oversight has been discussed with the people responsible for this task in the analytical group'. The validation was performed under the assumption the instrument was properly tuned. See Section XII. Documentation

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on August 16, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance

with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. 1-methylnaphthalene (1.45 ng/L), 2-methylnaphthalene (1.79 ng/L) and naphthalene (3.65 ng/L) were detected in the method blank. Results for 1-methylnaphthalene, 2-methylnaphthalene and naphthalene in E13-073112 and E13D-073112 and 1-methylnaphthalene and naphthalene in E13FB-073112 were qualified as not detected (U) at the Reporting Limit (RL) due to sample due to sample concentrations detected within five-times the concentration found in the method blank.

Following qualification based on the method blank, 2,3-dihydroindene was detected in the field blank. 2,3-dihydroindene was sufficiently high in the samples that the amount detected in the field blank would have no impact on the reported results.

V. Surrogate Compound Recovery

Recoveries of all surrogate compounds were correctly calculated, accurately reported. Percent recoveries (%R) were within acceptance limits with the exception of chrysene-d12 in E13-073112 and E13D-073112. Sample results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, ideno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene were not qualified because these analytes were subsequently qualified based on unacceptable MS/MSD recoveries.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample E7-102512. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
2,3-Benzofuran			32	30-150 (25)	J/UJ
2,3-Dihydroindene			33	30-150 (25)	J/UJ
1-Methylnaphthalene			32	30-150 (25)	J/UJ
2-Methylnaphthalene			32	25-95 (25)	J/UJ
Acenaphthene		14	32	30-150 (25)	J/UJ
Acenaphthylene			33	30-150 (25)	J/UJ
Acridine			33	30-150 (25)	J/UJ
Anthracene			36	30-150 (25)	J/UJ
Benzo[a]anthracene		26		30-150 (25)	J/UJ
Benzo[a]pyrene	7	7		30-150 (25)	L/R
Benzo[e]pyrene	8	8		37-105 (25)	L/R
Benzo[b]fluoranthene	10	9		30-150 (25)	L/R
Benzo[b]thiophene			34	30-150 (25)	J/UJ
Benzo[k]fluoranthene	9	7		30-150 (25)	L/R
Benzo[g,h,i]perylene	4	3	34	30-150 (25)	L/R
Carbazole			91	30-150 (25)	R
Dibenz[a,h]anthracene	4	2	57	30-150 (25)	L/R
Dibenzofuran			33	30-150 (25)	J/UJ
Dibenzothiophene			33	30-150 (25)	J/UJ
Fluoranthene			28	30-150 (25)	J/UJ
Fluorene			34	34-96 (25)	J/UJ
Indene			34	22-86 (25)	J/UJ
Indole			63	30-150 (25)	J/UJ
Ideno[1,2,3-cd]pyrene	4	3	47	30-150 (25)	L/R
Naphthalene			32	27-95 (25)	J/UJ
Perylene	8	8		30-150 (25)	L/R
Phenanthrene			32	30-150 (25)	J/UJ
Pyrene			28	30-150 (25)	J/UJ
Quinoline			30	20-112 (25)	J/UJ
Biphenyl			31	30-150 (25)	J/UJ

*based on amount recovered.

Results for non-detects in all field samples for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, dibenz[a,h]anthracene, ideno[1,2,3,cd]pyrene and perylene were qualified as rejected (R) due to unacceptable MS/MSD recoveries.

Results for 2,3-benzofuran, 2,3-dihydroindene, 1-methylnaphthalene, 2-methylnaphthalene, acenaphthylene, acridine, anthracene benzo[a]anthracene, benzo[b]thiophene, dibenzofuran, dibenzothiophene, fluoranthene, fluorene, indene, indole, naphthalene, phenanthrene, pyrene, quinoline and biphenyl were qualified as estimated (L, UJ) in all field samples due to low MSD recovery or high RPD values. Results for Acenaphthene were qualified as estimated (L, UJ) in all samples due to high RPD value.

Results for Carbazole were qualified as rejected (R) in all samples because the RPD value was greater than 90% (91%).

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable.

VII. Field Duplicate

Sample E13D-073112 was collected as a field duplicate of sample E13-073112. All percent differences were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate samples. Dibenzofuran (1.3 ng/L) and fluorene (0.99 ng/L) were detected in E13-073112 but were not reported in the paired sample. Results were qualified as not detected (U) at the analyte-specific RL.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limit for pyrene. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals.

The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issue was observed:

- The tune verification associated with sample analyses was missing from the lab report. The laboratory was contacted regarding the missing information. As discussed in Section II. GC/MS Instrument Performance Check, the laboratory was unable to provide any documentation that the instrument was properly tuned. The results of the initial calibration and ICV were acceptable, indicating the instrument was operating under acceptable tuning conditions. Therefore, the validation effort was performed under the assumption the instrument was properly tuned. However, this issue affects the validity of the reported data, and may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for carbazole were qualified as rejected (R) in all samples because the MS/MSD RPD value was greater than 90% (91%).
- Results for dibenzofuran and fluorene in E13D-073112 were qualified as not detected (U) at the analyte-specific RL due to imprecision in field duplicate samples.
- Results for 1-methylnaphthalene, 2-methylnaphthalene and naphthalene in E13-073112 and E13D-073112 and 2-methylnaphthalene and naphthalene in E13FB-073112 were qualified as not detected (U) at the Reporting Limit (RL) due to sample due to sample concentrations detected within five-times the concentration found in the method blank.
- Results in all field samples for benzo[a]pyrene, benzo[e]pyrene,

benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, carbazole, dibenz[a,h]anthracene, ideno[1,2,3,cd]pyrene and perylene were qualified as rejected (R) due to unacceptable MS/MSD recoveries.

- Results for 2,3-benzofuran, 2,3-dihydroindene, 1-methylnaphthalene, acenaphthene, acenaphthylene, acridine, anthracene, benzo[a]anthracene, benzo[b]thiophene, dibenzofuran, dibenzothiophene, fluoranthene, fluorene, indene, indole, phenanthrene, pyrene, quinoline and biphenyl were qualified as estimated (L, UJ) in all field samples due to low MSD recovery or high RPD values.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: July 31, 2012

Job No. 280-31689-1

ddms Project No. 2006-0022

Sample Location		E13-073112		E13D-073112		E13FB-073112							
Lab Sample ID		280-31689-1		280-31689-2		280-31689-3							
Initial Volume		4224.5		4193.7		4220.7							
Dilution Factor		0.95		0.95		0.95							
RL													
5.4	2,3-Dibenzofuran		UJ		UJ		UJ						
5.0	2,3-Dihydroindene	6.8	L	5.8	L	0.99	L						
5.6	1-Methylnaphthalene		U		U		UJ						
5.9	2-Methylnaphthalene		U		U		U						
5.7	Acenaphthene	110	L	100	L		UJ						
4.8	Acenaphthylene	9.8	L	9.2	L		UJ						
6.5	Acridine		UJ		UJ		UJ						
4.2	Anthracene		UJ		UJ		UJ						
4.3	Benzo[a]anthracene		UJ		UJ		UJ						
2.5	Benzo[a]pyrene		R		R		R						
4.3	Benzo[e]pyrene		R		R		R						
4.7	Benzo[b]fluoranthene		R		R		R						
5.2	Benzo(b)thiopene		UJ		UJ		UJ						
4.1	Benzo[k]fluoranthene		R		R		R						
6.2	Benzo[g,h,i]perylene		R		R		R						
3.8	Carbazole		R		R		R						
5.6	Chrysene		UJ		UJ		UJ						
5.9	Dibenz(a,h)anthracene		R		R		R						
5.7	Dibenzofuran		UJ		U		UJ						
4.1	Dibenzothiophene	2.7	L	2.5	L		UJ						
4.6	Fluoranthene		UJ		UJ		UJ						
4.1	Fluorene		UJ		U		UJ						
4.7	Indene		UJ		UJ		UJ						
4.7	Indole		UJ		UJ		UJ						
5.4	Indeno[1,2,3-cd]pyrene		R		R		R						
8.6	Naphthalene		U		U		U						
3.8	Perylene		R		R		R						
6.3	Phenanthrene		UJ		UJ		UJ						
4.2	Pyrene	7.6	L	6.9	L		UJ						
9.0	Quinoline		UJ		UJ		UJ						
5.6	Biphenyl		UJ		UJ		UJ						

APPENDIX B

PAHs in Water

Laboratory Form 1s

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-31689-1

Client Sample ID: E13-073112

Lab Sample ID: 280-31689-1

Date Sampled: 07/31/2012 1000

Client Matrix: Water

Date Received: 08/01/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-132830	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-130801	Lab File ID:	G5_7250.D
Dilution:	1.0			Initial Weight/Volume:	4224.5 mL
Analysis Date:	08/16/2012 1740			Final Weight/Volume:	1000 uL
Prep Date:	08/04/2012 1255			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND <i>UJ</i>		0.64	5.1
2,3-Dihydroindene	6.8 <i>L</i>		0.66	4.7
1-Methylnaphthalene	4.0 <i>U</i>	<i>JB</i>	0.84	5.3
2-Methylnaphthalene	4.4 <i>U</i>	<i>JB</i>	0.93	5.6
Acenaphthene	110 <i>L</i>		0.47	5.4
Acenaphthylene	9.8 <i>L</i>		0.73	4.5
Acridine	ND <i>UJ</i>		6.2	6.2
Anthracene	ND <i>UJ</i>		0.76	4.0
Benzo[a]anthracene	ND <i>UJ</i>		0.87	4.1
Benzo[a]pyrene	ND <i>R</i>		1.2	2.4
Benzo[e]pyrene	ND <i>R</i>		1.1	4.1
Benzo[b]fluoranthene	ND <i>R</i>		1.3	4.5
Benzo(b)thiophene	ND <i>UJ</i>		0.71	4.9
Benzo[k]fluoranthene	ND <i>R</i>		1.2	3.9
Benzo[g,h,i]perylene	ND <i>R</i>		1.1	5.9
Carbazole	ND <i>R</i>		0.68	3.6
Chrysene	ND <i>UJ</i>		1.2	5.3
Dibenz(a,h)anthracene	ND <i>R</i>		0.98	5.6
Dibenzofuran	ND <i>UJ</i>		0.94	5.4
Dibenzothiophene	2.7 <i>L</i>	<i>J</i>	0.93	3.9
Fluoranthene	ND <i>UJ</i>		1.6	4.4
Fluorene	ND <i>UJ</i>		0.80	3.9
Indene	ND <i>UJ</i>		3.1	4.5
Indole	ND <i>UJ</i>		1.6	4.5
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.2	5.1
Naphthalene	8.4 <i>U</i>	<i>B</i>	1.1	8.1
Perylene	ND <i>R</i>		3.6	3.6
Phenanthrene	ND <i>UJ</i>		3.0	6.0
Pyrene	7.6 <i>L</i>		0.94	4.0
Quinoline	ND <i>UJ</i>		5.3	8.5
Biphenyl	ND <i>UJ</i>		0.99	5.3

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	17	X	28 - 101
Naphthalene-d8 (Surr)	82		22 - 97

Summit
8/22/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-31689-1

Client Sample ID: E13D-073112

Lab Sample ID: 280-31689-2FD

Date Sampled: 07/31/2012 1000

Client Matrix: Water

Date Received: 08/01/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-132830	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-130801	Lab File ID:	G5_7253.D
Dilution:	1.0			Initial Weight/Volume:	4193.7 mL
Analysis Date:	08/16/2012 1924			Final Weight/Volume:	1000 uL
Prep Date:	08/04/2012 1255			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND <i>UJ</i>		0.65	5.2
2,3-Dihydroindene	5.8 <i>L</i>		0.67	4.8
1-Methylnaphthalene	1.8 <i>U</i>	<i>JB</i>	0.85	5.3
2-Methylnaphthalene	1.8 <i>U</i>	<i>JB</i>	0.93	5.6
Acenaphthene	100 <i>L</i>		0.48	5.4
Acenaphthylene	9.2 <i>L</i>		0.73	4.6
Acridine	ND <i>UJ</i>		6.2	6.2
Anthracene	ND <i>UJ</i>		0.76	4.0
Benzo[a]anthracene	ND <i>UJ</i>		0.88	4.1
Benzo[a]pyrene	ND <i>R</i>		1.2	2.4
Benzo[e]pyrene	ND <i>R</i>		1.1	4.1
Benzo[b]fluoranthene	ND <i>R</i>		1.3	4.5
Benzo(b)thiophene	ND <i>UJ</i>		0.72	5.0
Benzo[k]fluoranthene	ND <i>R</i>		1.2	3.9
Benzo[g,h,i]perylene	ND <i>R</i>		1.1	5.9
Carbazole	ND <i>R</i>		0.69	3.6
Chrysene	ND <i>UJ</i>		1.2	5.3
Dibenz(a,h)anthracene	ND <i>R</i>		0.99	5.6
Dibenzofuran	1.3 <i>U</i>	<i>J</i>	0.94	5.4
Dibenzothiophene	2.5 <i>L</i>	<i>J</i>	0.93	3.9
Fluoranthene	ND <i>UJ</i>		1.6	4.4
Fluorene	0.99 <i>U</i>	<i>J</i>	0.81	3.9
Indene	ND <i>UJ</i>		3.1	4.5
Indole	ND <i>UJ</i>		1.7	4.5
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.2	5.2
Naphthalene	3.0 <i>U</i>	<i>JB</i>	1.1	8.2
Perylene	ND <i>R</i>		3.6	3.6
Phenanthrene	ND <i>UJ</i>		3.1	6.0
Pyrene	6.9 <i>L</i>		0.94	4.0
Quinoline	ND <i>UJ</i>		5.4	8.6
Biphenyl	ND <i>UJ</i>		1.0	5.3
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	68		23 - 84	
Chrysene-d12 (Surr)	16	X	28 - 101	
Naphthalene-d8 (Surr)	73		22 - 97	

Summit
2/22/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-31689-1

Client Sample ID: E13FB-073112

Lab Sample ID: 280-31689-3FB

Date Sampled: 07/31/2012 1000

Client Matrix: Water

Date Received: 08/01/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-132830	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-130801	Lab File ID:	G5_7254.D
Dilution:	1.0			Initial Weight/Volume:	4220.7 mL
Analysis Date:	08/16/2012 1958			Final Weight/Volume:	1000 uL
Prep Date:	08/04/2012 1255			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND <i>UJ</i>		0.64	5.1
2,3-Dihydroindene	0.99 <i>L</i>	<i>J</i>	0.66	4.7
1-Methylnaphthalene	ND <i>UJ</i>		0.84	5.3
2-Methylnaphthalene	<i>1.2 U</i>	<i>JB</i>	0.93	5.6
Acenaphthene	ND <i>UJ</i>		0.47	5.4
Acenaphthylene	ND <i>UJ</i>		0.73	4.5
Acridine	ND <i>UJ</i>		6.2	6.2
Anthracene	ND <i>UJ</i>		0.76	4.0
Benzo[a]anthracene	ND <i>UJ</i>		0.87	4.1
Benzo[a]pyrene	ND <i>R</i>		1.2	2.4
Benzo[e]pyrene	ND <i>R</i>		1.1	4.1
Benzo[b]fluoranthene	ND <i>R</i>		1.3	4.5
Benzo(b)thiophene	ND <i>UJ</i>		0.71	4.9
Benzo[k]fluoranthene	ND <i>R</i>		1.2	3.9
Benzo[g,h,i]perylene	ND <i>R</i>		1.1	5.9
Carbazole	ND <i>R</i>		0.68	3.6
Chrysene	ND <i>UJ</i>		1.2	5.3
Dibenz(a,h)anthracene	ND <i>R</i>		0.99	5.6
Dibenzofuran	ND <i>UJ</i>		0.94	5.4
Dibenzothiophene	ND <i>UJ</i>		0.93	3.9
Fluoranthene	ND <i>UJ</i>		1.6	4.4
Fluorene	ND <i>UJ</i>		0.81	3.9
Indene	ND <i>UJ</i>		3.1	4.5
Indole	ND <i>UJ</i>		1.6	4.5
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.2	5.1
Naphthalene	<i>3.2 U</i>	<i>JB</i>	1.1	8.2
Perylene	ND <i>R</i>		3.6	3.6
Phenanthrene	ND <i>UJ</i>		3.0	6.0
Pyrene	ND <i>UJ</i>		0.94	4.0
Quinoline	ND <i>UJ</i>		5.4	8.5
Biphenyl	ND <i>UJ</i>		1.0	5.3
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	81		23 - 84	
Chrysene-d12 (Surr)	93		28 - 101	
Naphthalene-d8 (Surr)	83		22 - 97	

John Russell
2/22/13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

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Tel: (303)736-0100

TestAmerica Job ID: 280-32719-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

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Attn: William M Gregg



Authorized for release by:

9/19/2012 1:31:12 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Job ID: 280-32719-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-32719-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Three samples were received under chain of custody on August 30, 2012. The samples were received at temperatures of 3.5°C, 5.0°C and 4.5°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

E13-082812 (280-32719-1) had an initial volume of 3998 mL

E13D-082812 (280-32719-2) had an initial volume of 3659.2 mL

E13FB-082812 (280-32719-3) had an initial volume of 3853.7 mL

Low levels of Benzo[a]anthracene, Benzo[e]pyrene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Indeno[1,2,3-cd]pyrene and Naphthalene are present in the method blank associated with prep batch 280-135481. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, Benzo[b]fluoranthene and Pyrene were recovered above the reporting limits in the method blank associated with prep batch 280-135481. This is an indicator that the data may be biased high. No detectable concentrations of Benzo[b]fluoranthene were present above the reporting limit in the associated samples. Pyrene was detected above the reporting limits in samples E13-082812 (280-32719-1) and E13D-082812 (280-32719-2). Re-extraction was not possible due to insufficient sample volume remaining. Therefore, the data is reported as is. The associated positive results in the analytical report have been flagged with a "B".

The LCS associated with prep batch 280-135481 exhibited percent recoveries below the QC control limits for Acridine at 18% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 16% (limits 30-150%). 7,12-Dimethylbenz(a)anthracene is not a compound of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Job ID: 280-32719-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with “*”.

The MS/MSD associated with prep batch 280-135481 was performed using sample E13-082812 (280-32719-1), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indeno[1,2,3-cd]pyrene	Perylene

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-32719-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	29
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	9	9
Samples and QC Internal Standard Area	21	21
TOTAL	163	158
% Completeness	96.9%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-32719-1					
Sample: E13-082812		DUP: E13D-082812			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	110	Acenaphthene	120	8.7	
Acenaphthylene	12	Acenaphthylene	9.7	21.2	
Acridine	ND	Acridine	ND	0.0	
Anthracene	1.1	Anthracene	ND	NC	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	1.6	Benzo(b)fluoranthene	1.6	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	1.4	Benzo(a)pyrene	1.4	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	1.9	Dibenzofuran	ND	NC	
Dibenzothiophene	2.6	Dibenzothiophene	2.6	0.0	
2,3-Dihydroindene	7.1	2,3-Dihydroindene	6.4	10.4	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	1.6	Fluorene	ND	NC	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	10	2-Methylnaphthalene	ND	NC	
1-Methylnaphthalene	9.5	1-Methylnaphthalene	ND	NC	
Naphthalene	14	Naphthalene	2.6	137.3	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	11	Pyrene	10	9.5	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Client Sample ID: E13-082812

Lab Sample ID: 280-32719-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	7.1		5.0	0.70	ng/L			1	8270C	Total/NA
1-Methylnaphthalene	9.5		5.6	0.89	ng/L			1	8270C	Total/NA
2-Methylnaphthalene	10		5.9	0.98	ng/L			1	8270C	Total/NA
Acenaphthene	110		5.7	0.50	ng/L			1	8270C	Total/NA
Acenaphthylene	12		4.8	0.77	ng/L			1	8270C	Total/NA
Anthracene	1.1	J	4.2	0.80	ng/L			1	8270C	Total/NA
Benzo[a]pyrene	1.4	J	2.5	1.2	ng/L			1	8270C	Total/NA
Benzo[b]fluoranthene	1.6	J B	4.7	1.4	ng/L			1	8270C	Total/NA
Dibenzofuran	1.9	J	5.7	0.99	ng/L			1	8270C	Total/NA
Dibenzothiophene	2.6	J	4.1	0.98	ng/L			1	8270C	Total/NA
Fluorene	1.6	J	4.1	0.85	ng/L			1	8270C	Total/NA
Naphthalene	14	B	8.6	1.1	ng/L			1	8270C	Total/NA
Pyrene	11	B	4.2	0.99	ng/L			1	8270C	Total/NA

Client Sample ID: E13D-082812

Lab Sample ID: 280-32719-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	6.4		5.5	0.77	ng/L			1	8270C	Total/NA
Acenaphthene	120		6.2	0.55	ng/L			1	8270C	Total/NA
Acenaphthylene	9.7		5.2	0.84	ng/L			1	8270C	Total/NA
Benzo[a]pyrene	1.4	J	2.7	1.4	ng/L			1	8270C	Total/NA
Benzo[b]fluoranthene	1.6	J B	5.1	1.5	ng/L			1	8270C	Total/NA
Dibenzothiophene	2.6	J	4.5	1.1	ng/L			1	8270C	Total/NA
Naphthalene	2.6	J B	9.4	1.2	ng/L			1	8270C	Total/NA
Pyrene	10	B	4.6	1.1	ng/L			1	8270C	Total/NA

Client Sample ID: E13FB-082812

Lab Sample ID: 280-32719-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]pyrene	1.5	J	2.6	1.3	ng/L			1	8270C	Total/NA
Benzo[b]fluoranthene	1.8	J B	4.9	1.4	ng/L			1	8270C	Total/NA
Benzo[g,h,i]perylene	1.3	J B	6.4	1.2	ng/L			1	8270C	Total/NA
Indeno[1,2,3-cd]pyrene	1.3	J B	5.6	1.3	ng/L			1	8270C	Total/NA
Naphthalene	1.8	J B	8.9	1.2	ng/L			1	8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-32719-1	E13-082812	Water	08/28/12 07:00	08/30/12 09:30
280-32719-2	E13D-082812	Water	08/28/12 07:00	08/30/12 09:30
280-32719-3	E13FB-082812	Water	08/28/12 07:00	08/30/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Client Sample ID: E13-082812

Lab Sample ID: 280-32719-1

Date Collected: 08/28/12 07:00

Matrix: Water

Date Received: 08/30/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/01/12 11:30	09/16/12 15:39	1
2,3-Dihydroindene	7.1		5.0	0.70	ng/L		09/01/12 11:30	09/16/12 15:39	1
1-Methylnaphthalene	9.5		5.6	0.89	ng/L		09/01/12 11:30	09/16/12 15:39	1
2-Methylnaphthalene	10		5.9	0.98	ng/L		09/01/12 11:30	09/16/12 15:39	1
Acenaphthene	110		5.7	0.50	ng/L		09/01/12 11:30	09/16/12 15:39	1
Acenaphthylene	12		4.8	0.77	ng/L		09/01/12 11:30	09/16/12 15:39	1
Acridine	ND	*	6.5	6.5	ng/L		09/01/12 11:30	09/16/12 15:39	1
Anthracene	1.1	J	4.2	0.80	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[a]pyrene	1.4	J	2.5	1.2	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[b]fluoranthene	1.6	J B	4.7	1.4	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/01/12 11:30	09/16/12 15:39	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		09/01/12 11:30	09/16/12 15:39	1
Carbazole	ND		3.8	0.72	ng/L		09/01/12 11:30	09/16/12 15:39	1
Chrysene	ND		5.6	1.2	ng/L		09/01/12 11:30	09/16/12 15:39	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/01/12 11:30	09/16/12 15:39	1
Dibenzofuran	1.9	J	5.7	0.99	ng/L		09/01/12 11:30	09/16/12 15:39	1
Dibenzothiophene	2.6	J	4.1	0.98	ng/L		09/01/12 11:30	09/16/12 15:39	1
Fluoranthene	ND		4.6	1.7	ng/L		09/01/12 11:30	09/16/12 15:39	1
Fluorene	1.6	J	4.1	0.85	ng/L		09/01/12 11:30	09/16/12 15:39	1
Indene	ND		4.7	3.3	ng/L		09/01/12 11:30	09/16/12 15:39	1
Indole	ND		4.7	1.7	ng/L		09/01/12 11:30	09/16/12 15:39	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		09/01/12 11:30	09/16/12 15:39	1
Naphthalene	14	B	8.6	1.1	ng/L		09/01/12 11:30	09/16/12 15:39	1
Perylene	ND		3.8	3.8	ng/L		09/01/12 11:30	09/16/12 15:39	1
Phenanthrene	ND		6.3	3.2	ng/L		09/01/12 11:30	09/16/12 15:39	1
Pyrene	11	B	4.2	0.99	ng/L		09/01/12 11:30	09/16/12 15:39	1
Quinoline	ND		9.0	5.7	ng/L		09/01/12 11:30	09/16/12 15:39	1
Biphenyl	ND		5.6	1.1	ng/L		09/01/12 11:30	09/16/12 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	77		23 - 84	09/01/12 11:30	09/16/12 15:39	1
Chrysene-d12 (Surr)	40		28 - 101	09/01/12 11:30	09/16/12 15:39	1
Naphthalene-d8 (Surr)	81		22 - 97	09/01/12 11:30	09/16/12 15:39	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Client Sample ID: E13D-082812

Lab Sample ID: 280-32719-2

Date Collected: 08/28/12 07:00

Matrix: Water

Date Received: 08/30/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.74	ng/L		09/01/12 11:30	09/16/12 17:25	1
2,3-Dihydroindene	6.4		5.5	0.77	ng/L		09/01/12 11:30	09/16/12 17:25	1
1-Methylnaphthalene	ND		6.1	0.97	ng/L		09/01/12 11:30	09/16/12 17:25	1
2-Methylnaphthalene	ND		6.4	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Acenaphthene	120		6.2	0.55	ng/L		09/01/12 11:30	09/16/12 17:25	1
Acenaphthylene	9.7		5.2	0.84	ng/L		09/01/12 11:30	09/16/12 17:25	1
Acridine	ND	*	7.1	7.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Anthracene	ND		4.6	0.87	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[a]anthracene	ND		4.7	1.0	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[a]pyrene	1.4	J	2.7	1.4	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[e]pyrene	ND		4.7	1.2	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[b]fluoranthene	1.6	J B	5.1	1.5	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo(b)thiophene	ND		5.7	0.82	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		09/01/12 11:30	09/16/12 17:25	1
Benzo[g,h,i]perylene	ND		6.8	1.3	ng/L		09/01/12 11:30	09/16/12 17:25	1
Carbazole	ND		4.2	0.79	ng/L		09/01/12 11:30	09/16/12 17:25	1
Chrysene	ND		6.1	1.4	ng/L		09/01/12 11:30	09/16/12 17:25	1
Dibenz(a,h)anthracene	ND		6.4	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Dibenzofuran	ND		6.2	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Dibenzothiophene	2.6	J	4.5	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Fluoranthene	ND		5.0	1.8	ng/L		09/01/12 11:30	09/16/12 17:25	1
Fluorene	ND		4.5	0.93	ng/L		09/01/12 11:30	09/16/12 17:25	1
Indene	ND		5.1	3.6	ng/L		09/01/12 11:30	09/16/12 17:25	1
Indole	ND		5.1	1.9	ng/L		09/01/12 11:30	09/16/12 17:25	1
Indeno[1,2,3-cd]pyrene	ND		5.9	1.4	ng/L		09/01/12 11:30	09/16/12 17:25	1
Naphthalene	2.6	J B	9.4	1.2	ng/L		09/01/12 11:30	09/16/12 17:25	1
Perylene	ND		4.2	4.2	ng/L		09/01/12 11:30	09/16/12 17:25	1
Phenanthrene	ND		6.9	3.5	ng/L		09/01/12 11:30	09/16/12 17:25	1
Pyrene	10	B	4.6	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1
Quinoline	ND		9.8	6.2	ng/L		09/01/12 11:30	09/16/12 17:25	1
Biphenyl	ND		6.1	1.1	ng/L		09/01/12 11:30	09/16/12 17:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	78		23 - 84	09/01/12 11:30	09/16/12 17:25	1
Chrysene-d12 (Surr)	30		28 - 101	09/01/12 11:30	09/16/12 17:25	1
Naphthalene-d8 (Surr)	84		22 - 97	09/01/12 11:30	09/16/12 17:25	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Client Sample ID: E13FB-082812

Lab Sample ID: 280-32719-3

Date Collected: 08/28/12 07:00

Matrix: Water

Date Received: 08/30/12 09:30

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.71	ng/L		09/01/12 11:30	09/16/12 18:00	1
2,3-Dihydroindene	ND		5.2	0.73	ng/L		09/01/12 11:30	09/16/12 18:00	1
1-Methylnaphthalene	ND		5.8	0.92	ng/L		09/01/12 11:30	09/16/12 18:00	1
2-Methylnaphthalene	ND		6.1	1.0	ng/L		09/01/12 11:30	09/16/12 18:00	1
Acenaphthene	ND		5.9	0.52	ng/L		09/01/12 11:30	09/16/12 18:00	1
Acenaphthylene	ND		5.0	0.80	ng/L		09/01/12 11:30	09/16/12 18:00	1
Acridine	ND	*	6.7	6.7	ng/L		09/01/12 11:30	09/16/12 18:00	1
Anthracene	ND		4.4	0.83	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[a]anthracene	ND		4.5	0.95	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[a]pyrene	1.5	J	2.6	1.3	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[b]fluoranthene	1.8	J B	4.9	1.4	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		09/01/12 11:30	09/16/12 18:00	1
Benzo[g,h,i]perylene	1.3	J B	6.4	1.2	ng/L		09/01/12 11:30	09/16/12 18:00	1
Carbazole	ND		3.9	0.75	ng/L		09/01/12 11:30	09/16/12 18:00	1
Chrysene	ND		5.8	1.3	ng/L		09/01/12 11:30	09/16/12 18:00	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		09/01/12 11:30	09/16/12 18:00	1
Dibenzofuran	ND		5.9	1.0	ng/L		09/01/12 11:30	09/16/12 18:00	1
Dibenzothiophene	ND		4.3	1.0	ng/L		09/01/12 11:30	09/16/12 18:00	1
Fluoranthene	ND		4.8	1.8	ng/L		09/01/12 11:30	09/16/12 18:00	1
Fluorene	ND		4.3	0.88	ng/L		09/01/12 11:30	09/16/12 18:00	1
Indene	ND		4.9	3.4	ng/L		09/01/12 11:30	09/16/12 18:00	1
Indole	ND		4.9	1.8	ng/L		09/01/12 11:30	09/16/12 18:00	1
Indeno[1,2,3-cd]pyrene	1.3	J B	5.6	1.3	ng/L		09/01/12 11:30	09/16/12 18:00	1
Naphthalene	1.8	J B	8.9	1.2	ng/L		09/01/12 11:30	09/16/12 18:00	1
Perylene	ND		4.0	4.0	ng/L		09/01/12 11:30	09/16/12 18:00	1
Phenanthrene	ND		6.5	3.3	ng/L		09/01/12 11:30	09/16/12 18:00	1
Pyrene	ND		4.4	1.0	ng/L		09/01/12 11:30	09/16/12 18:00	1
Quinoline	ND		9.3	5.9	ng/L		09/01/12 11:30	09/16/12 18:00	1
Biphenyl	ND		5.8	1.1	ng/L		09/01/12 11:30	09/16/12 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	78		23 - 84	09/01/12 11:30	09/16/12 18:00	1
Chrysene-d12 (Surr)	87		28 - 101	09/01/12 11:30	09/16/12 18:00	1
Naphthalene-d8 (Surr)	83		22 - 97	09/01/12 11:30	09/16/12 18:00	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FD10	Chrysene-d12 (Surr)	Naphthalene-d8 (Surr)
		(23-84)	(28-101)	(22-97)
280-32719-1	E13-082812	77	40	81
280-32719-1 MS	E13-082812	82	51	86
280-32719-1 MSD	E13-082812	72	48	75
280-32719-2	E13D-082812	78	30	84
280-32719-3	E13FB-082812	78	87	83
LCS 280-135481/2-A	Lab Control Sample	75	83	80
MB 280-135481/1-A	Method Blank	69	85	88
Surrogate Legend				
FD10 = Fluorene-d10 (Surr)				
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)				
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)				

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-135481/1-A

Matrix: Water

Analysis Batch: 137487

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 135481

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/01/12 11:30	09/16/12 14:28	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		09/01/12 11:30	09/16/12 14:28	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		09/01/12 11:30	09/16/12 14:28	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		09/01/12 11:30	09/16/12 14:28	1
Acenaphthene	ND		5.7	0.50	ng/L		09/01/12 11:30	09/16/12 14:28	1
Acenaphthylene	ND		4.8	0.77	ng/L		09/01/12 11:30	09/16/12 14:28	1
Acridine	ND		6.5	6.5	ng/L		09/01/12 11:30	09/16/12 14:28	1
Anthracene	ND		4.2	0.80	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[a]anthracene	3.45	J	4.3	0.92	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[e]pyrene	3.89	J	4.3	1.1	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[b]fluoranthene	6.02		4.7	1.4	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[k]fluoranthene	3.58	J	4.1	1.2	ng/L		09/01/12 11:30	09/16/12 14:28	1
Benzo[g,h,i]perylene	4.38	J	6.2	1.2	ng/L		09/01/12 11:30	09/16/12 14:28	1
Carbazole	ND		3.8	0.72	ng/L		09/01/12 11:30	09/16/12 14:28	1
Chrysene	4.09	J	5.6	1.2	ng/L		09/01/12 11:30	09/16/12 14:28	1
Dibenz(a,h)anthracene	1.43	J	5.9	1.0	ng/L		09/01/12 11:30	09/16/12 14:28	1
Dibenzofuran	ND		5.7	0.99	ng/L		09/01/12 11:30	09/16/12 14:28	1
Dibenzothiophene	ND		4.1	0.98	ng/L		09/01/12 11:30	09/16/12 14:28	1
Fluoranthene	4.45	J	4.6	1.7	ng/L		09/01/12 11:30	09/16/12 14:28	1
Fluorene	ND		4.1	0.85	ng/L		09/01/12 11:30	09/16/12 14:28	1
Indene	ND		4.7	3.3	ng/L		09/01/12 11:30	09/16/12 14:28	1
Indole	ND		4.7	1.7	ng/L		09/01/12 11:30	09/16/12 14:28	1
Indeno[1,2,3-cd]pyrene	3.77	J	5.4	1.3	ng/L		09/01/12 11:30	09/16/12 14:28	1
Naphthalene	2.18	J	8.6	1.1	ng/L		09/01/12 11:30	09/16/12 14:28	1
Perylene	ND		3.8	3.8	ng/L		09/01/12 11:30	09/16/12 14:28	1
Phenanthrene	ND		6.3	3.2	ng/L		09/01/12 11:30	09/16/12 14:28	1
Pyrene	4.21		4.2	0.99	ng/L		09/01/12 11:30	09/16/12 14:28	1
Quinoline	ND		9.0	5.7	ng/L		09/01/12 11:30	09/16/12 14:28	1
Biphenyl	ND		5.6	1.1	ng/L		09/01/12 11:30	09/16/12 14:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	69		23 - 84	09/01/12 11:30	09/16/12 14:28	1
Chrysene-d12 (Surr)	85		28 - 101	09/01/12 11:30	09/16/12 14:28	1
Naphthalene-d8 (Surr)	88		22 - 97	09/01/12 11:30	09/16/12 14:28	1

Lab Sample ID: LCS 280-135481/2-A

Matrix: Water

Analysis Batch: 137487

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	59.2		ng/L		79	30 - 150
2,3-Dihydroindene	75.0	58.2		ng/L		78	30 - 150
1-Methylnaphthalene	75.0	70.0		ng/L		93	30 - 150
2-Methylnaphthalene	75.0	70.9		ng/L		94	25 - 95
3-Methylcholanthrene	75.0	37.8		ng/L		50	30 - 150
Acenaphthene	75.0	62.3		ng/L		83	30 - 150
Acenaphthylene	75.0	60.9		ng/L		81	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-135481/2-A

Matrix: Water

Analysis Batch: 137487

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	13.9	*	ng/L		18	30 - 150
Anthracene	75.0	59.4		ng/L		79	30 - 150
Benzo[a]anthracene	75.0	60.9		ng/L		81	30 - 150
Benzo[a]pyrene	75.0	55.4		ng/L		74	30 - 150
Benzo[e]pyrene	75.0	59.2		ng/L		79	37 - 105
Benzo[b]fluoranthene	75.0	55.4		ng/L		74	30 - 150
Benzo(b)thiophene	75.0	60.3		ng/L		80	30 - 150
Benzo[k]fluoranthene	75.0	56.5		ng/L		75	30 - 150
Benzo[g,h,i]perylene	75.0	54.9		ng/L		73	30 - 150
Carbazole	75.0	61.6		ng/L		82	30 - 150
Chrysene	75.0	63.0		ng/L		84	20 - 136
Dibenz(a,h)anthracene	75.0	48.4		ng/L		65	30 - 150
Dibenzofuran	75.0	61.4		ng/L		82	30 - 150
Dibenzothiophene	75.0	60.3		ng/L		80	30 - 150
Fluoranthene	75.0	62.3		ng/L		83	30 - 150
Fluorene	75.0	61.3		ng/L		82	34 - 96
Indene	75.0	58.9		ng/L		79	22 - 86
Indole	75.0	56.8		ng/L		76	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	53.8		ng/L		72	30 - 150
Naphthalene	75.0	66.8		ng/L		89	27 - 95
Perylene	75.0	52.1		ng/L		69	30 - 150
Phenanthrene	75.0	61.7		ng/L		82	30 - 150
Pyrene	75.0	60.9		ng/L		81	30 - 150
Quinoline	75.0	47.1		ng/L		63	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	11.9	*	ng/L		16	30 - 150
Biphenyl	75.0	60.4		ng/L		81	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	83		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

Lab Sample ID: 280-32719-1 MS

Matrix: Water

Analysis Batch: 137487

Client Sample ID: E13-082812

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		77.2	66.5		ng/L		86	30 - 150
2,3-Dihydroindene	7.1		77.2	71.3		ng/L		83	30 - 150
1-Methylnaphthalene	9.5		77.2	66.0		ng/L		73	30 - 150
2-Methylnaphthalene	10		77.2	66.6		ng/L		73	25 - 95
3-Methylcholanthrene	ND		77.2	9.09	F	ng/L		12	30 - 150
Acenaphthene	110		77.2	188		ng/L		97	30 - 150
Acenaphthylene	12		77.2	76.7		ng/L		84	30 - 150
Acridine	ND	*	77.2	48.6		ng/L		63	30 - 150
Anthracene	1.1	J	77.2	70.1		ng/L		89	30 - 150
Benzo[a]anthracene	ND		77.2	37.9		ng/L		49	30 - 150
Benzo[a]pyrene	1.4	J	77.2	9.67	F	ng/L		11	30 - 150
Benzo[e]pyrene	ND		77.2	10.2	F	ng/L		13	37 - 105

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-32719-1 MS

Matrix: Water

Analysis Batch: 137487

Client Sample ID: E13-082812

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	1.6	J B	77.2	12.5	F	ng/L		14	30 - 150
Benzo(b)thiophene	ND		77.2	66.0		ng/L		85	30 - 150
Benzo[k]fluoranthene	ND		77.2	10.6	F	ng/L		14	30 - 150
Benzo[g,h,i]perylene	ND		77.2	4.28	J F	ng/L		6	30 - 150
Carbazole	ND		77.2	75.3		ng/L		97	30 - 150
Chrysene	ND		77.2	39.3		ng/L		51	20 - 136
Dibenz(a,h)anthracene	ND		77.2	3.54	J F	ng/L		5	30 - 150
Dibenzofuran	1.9	J	77.2	65.8		ng/L		83	30 - 150
Dibenzothiophene	2.6	J	77.2	70.4		ng/L		88	30 - 150
Fluoranthene	ND		77.2	68.1		ng/L		88	30 - 150
Fluorene	1.6	J	77.2	66.7		ng/L		84	34 - 96
Indene	ND		77.2	65.5		ng/L		85	22 - 86
Indole	ND		77.2	66.1		ng/L		86	30 - 150
Indeno[1,2,3-cd]pyrene	ND		77.2	4.40	J F	ng/L		6	30 - 150
Naphthalene	14	B	77.2	69.2		ng/L		71	27 - 95
Perylene	ND		77.2	10.0	F	ng/L		13	30 - 150
Phenanthrene	ND		77.2	69.1		ng/L		90	30 - 150
Pyrene	11	B	77.2	77.6		ng/L		87	30 - 150
Quinoline	ND		77.2	59.4		ng/L		77	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		77.2	61.0		ng/L		79	30 - 150
Biphenyl	ND		77.2	66.1		ng/L		86	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	51		28 - 101
Naphthalene-d8 (Surr)	86		22 - 97

Lab Sample ID: 280-32719-1 MSD

Matrix: Water

Analysis Batch: 137487

Client Sample ID: E13-082812

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	ND		77.1	56.2		ng/L		73	30 - 150	17	50
2,3-Dihydroindene	7.1		77.1	60.0		ng/L		69	30 - 150	17	50
1-Methylnaphthalene	9.5		77.1	57.5		ng/L		62	30 - 150	14	50
2-Methylnaphthalene	10		77.1	57.5		ng/L		61	25 - 95	15	50
3-Methylcholanthrene	ND		77.1	8.59	F	ng/L		11	30 - 150	6	50
Acenaphthene	110		77.1	161		ng/L		62	30 - 150	15	50
Acenaphthylene	12		77.1	65.2		ng/L		69	30 - 150	16	50
Acridine	ND	*	77.1	57.5		ng/L		75	30 - 150	17	50
Anthracene	1.1	J	77.1	64.2		ng/L		82	30 - 150	9	50
Benzo[a]anthracene	ND		77.1	35.3		ng/L		46	30 - 150	7	50
Benzo[a]pyrene	1.4	J	77.1	9.11	F	ng/L		10	30 - 150	6	50
Benzo[e]pyrene	ND		77.1	9.49	F	ng/L		12	37 - 105	7	50
Benzo[b]fluoranthene	1.6	J B	77.1	12.0	F	ng/L		13	30 - 150	5	50
Benzo(b)thiophene	ND		77.1	57.0		ng/L		74	30 - 150	15	50
Benzo[k]fluoranthene	ND		77.1	9.37	F	ng/L		12	30 - 150	12	50
Benzo[g,h,i]perylene	ND		77.1	4.26	J F	ng/L		6	30 - 150	0	50
Carbazole	ND		77.1	70.8		ng/L		92	30 - 150	6	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-32719-1 MSD

Matrix: Water

Analysis Batch: 137487

Client Sample ID: E13-082812

Prep Type: Total/NA

Prep Batch: 135481

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		77.1	36.8		ng/L		48	20 - 136	7	50
Dibenz(a,h)anthracene	ND		77.1	3.43	J F	ng/L		4	30 - 150	3	50
Dibenzofuran	1.9	J	77.1	57.7		ng/L		72	30 - 150	13	50
Dibenzothiophene	2.6	J	77.1	64.1		ng/L		80	30 - 150	9	50
Fluoranthene	ND		77.1	64.6		ng/L		84	30 - 150	5	50
Fluorene	1.6	J	77.1	58.5		ng/L		74	34 - 96	13	50
Indene	ND		77.1	56.3		ng/L		73	22 - 86	15	50
Indole	ND		77.1	56.0		ng/L		73	30 - 150	17	50
Indeno[1,2,3-cd]pyrene	ND		77.1	4.40	J F	ng/L		6	30 - 150	0	50
Naphthalene	14	B	77.1	63.0		ng/L		63	27 - 95	9	50
Perylene	ND		77.1	9.02	F	ng/L		12	30 - 150	11	50
Phenanthrene	ND		77.1	64.0		ng/L		83	30 - 150	8	50
Pyrene	11	B	77.1	73.4		ng/L		81	30 - 150	6	50
Quinoline	ND		77.1	50.0		ng/L		65	20 - 112	17	50
7,12-Dimethylbenz(a)anthracene	ND		77.1	58.9		ng/L		76	30 - 150	3	50
Biphenyl	ND		77.1	57.2		ng/L		74	30 - 150	14	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	72		23 - 84
Chrysene-d12 (Surr)	48		28 - 101
Naphthalene-d8 (Surr)	75		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

GC/MS Semi VOA

Prep Batch: 135481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-32719-1	E13-082812	Total/NA	Water	3520C	
280-32719-1 MS	E13-082812	Total/NA	Water	3520C	
280-32719-1 MSD	E13-082812	Total/NA	Water	3520C	
280-32719-2	E13D-082812	Total/NA	Water	3520C	
280-32719-3	E13FB-082812	Total/NA	Water	3520C	
LCS 280-135481/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-135481/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 137487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-32719-1	E13-082812	Total/NA	Water	8270C	135481
280-32719-1 MS	E13-082812	Total/NA	Water	8270C	135481
280-32719-1 MSD	E13-082812	Total/NA	Water	8270C	135481
280-32719-2	E13D-082812	Total/NA	Water	8270C	135481
280-32719-3	E13FB-082812	Total/NA	Water	8270C	135481
LCS 280-135481/2-A	Lab Control Sample	Total/NA	Water	8270C	135481
MB 280-135481/1-A	Method Blank	Total/NA	Water	8270C	135481

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Client Sample ID: E13-082812

Date Collected: 08/28/12 07:00

Date Received: 08/30/12 09:30

Lab Sample ID: 280-32719-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3998 mL	1000 uL	135481	09/01/12 11:30	JJW	TAL DEN
Total/NA	Analysis	8270C		1			137487	09/16/12 15:39	KGV	TAL DEN

Client Sample ID: E13D-082812

Date Collected: 08/28/12 07:00

Date Received: 08/30/12 09:30

Lab Sample ID: 280-32719-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3659.2 mL	1000 uL	135481	09/01/12 11:30	JJW	TAL DEN
Total/NA	Analysis	8270C		1			137487	09/16/12 17:25	KGV	TAL DEN

Client Sample ID: E13FB-082812

Date Collected: 08/28/12 07:00

Date Received: 08/30/12 09:30

Lab Sample ID: 280-32719-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3853.7 mL	1000 uL	135481	09/01/12 11:30	JJW	TAL DEN
Total/NA	Analysis	8270C		1			137487	09/16/12 18:00	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-32719-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-30-13
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-13
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-13
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-13
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-13
Wyoming (UST)	A2LA	8		10-31-13

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-32719-1

Login Number: 32719

List Source: TestAmerica Denver

List Number: 1

Creator: Bindel, Aaron M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-32719-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 28, 2013

Reilly\280-32719-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for one aqueous sample and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-32719-1 in a single data package. The following samples were reported:

E13-082812	E13D-082812	E13FB-082812
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Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[b]fluoranthene and Pyrene in E13-082812 in E13D-082812, and Naphthalene in E13D-082812, and results for Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Indeno[1,2,3-cd]pyrene and Naphthalene in E13FB-082812 were qualified as not detected (U) at the reporting limit (RL).
- Results for Benzo[a]pyrene in E13-082812 and E13D-082812 were qualified as not detected (U) at the RL.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Perylene and Benzo[k]fluoranthene in all field samples were qualified as estimated low (L, UJ).
- Results for Benzo[g,h,i]perylene in E13-082812 and E13D-082812 and Dibenz[a,h]anthracene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects.
- Results for Acridine in all field samples were qualified as estimated (UJ).
- Results for Anthracene, Dibenzofuran and Fluorene in E13-082812 were qualified as not detected (U) at the sample-specific RL and results for 1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene in E13-082812 were rejected (R).

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatile data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of October 28, 2012. The samples were received by the laboratory on October 30, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (3.5°C to 5.0°C; criteria 4.0°C \pm 2.0°C). All samples were extracted on September 1, 2012 which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on September 16, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". One perfluorotributylamine (FC-43) instrument performance check was run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. The performance check was documented based on the summary form provided. See Section XII Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on November 13, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a

national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. Benzo[a]anthracene (3.45 ng/L), Benzo[e]pyrene (3.89 ng/L), Benzo[b]fluoranthene (6.02 ng/L), Benzo[k]fluoranthene (3.58 ng/L), Benzo[g,h,i]perylene (4.38 ng/L), Chrysene (4.09 ng/L), Dibenz[a,h]anthracene (1.43 ng/L), Fluoranthene (4.45 ng/L), Indeno(1,2,3-cd)pyrene (2.18 ng/L), Naphthalene (2.18 ng/L) and Pyrene (4.21 ng/L) were detected in the method blank. Results for Benzo[b]fluoranthene and Pyrene in E13-082812, Benzo[b]fluoranthene, Naphthalene and Pyrene in E13D-082812 and E13D-082812, and Naphthalene in E13D-082812 were qualified as not detected (U) at the RL due to sample concentrations detected within five-times the concentration found in the method blank. Result for Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Indeno[1,2,3-cd]pyrene and Naphthalene in E13FB-082812 were qualified as not detected (U) at the reporting limit (RL) or reported concentration, whichever is greater, due to sample concentrations detected within five-times the concentration found in the method blank.

After qualification based on the method blank, Benzo[a]pyrene (1.5 ng/L), was detected in the field blank. Results for Benzo[a]pyrene in E13D-082812 were qualified as not detected (U) at the RL due to sample concentration detected within five-times the concentration found in the field blank

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample E13-082812. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo[a]pyrene	11	10		30-150 (25)	L/UJ
Benzo[e]pyrene	13	12		37-105 (25)	L/UJ
Benzo[b]fluoranthene	14	13		30-150 (25)	L/UJ
Benzo[k]fluoranthene	14	12		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	6	6		30-150 (25)	L/R
Dibenz[a,h]anthracene	5	4		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	6		30-150 (25)	L/R
Perylene	13	11		30-150 (25)	L/UJ

*based on amount recovered.

Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Perylene and Benzo[k]fluoranthene in all field samples were qualified as estimated low (L, UJ) and results for Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3-cd]pyrene and Perylene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of Acridine (18%R), which was outside acceptance limits (30-130%R). Results for Acridine in all field samples were qualified as estimated (UJ) due to unacceptable LCS recovery.

VII. Field Duplicate

Sample E13D-082812 was collected as a field duplicate of sample E13-082812. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate pairs with the exception of the analytes noted below:

Compound	E13-082812 (ng/L)	E13D-082812 (ng/L)
1-Methylnaphthalene	9.5	ND
2-Methnaphthalene	10	ND
Anthracene	1.1J	ND
Dibenzofuran	1.9J	ND
Fluorene	1.6J	ND
Naphthalene	14	ND

Results for Anthracene, Dibenzofuran and Fluorene in E13-082812 were qualified as not detected (U) at the sample-specific RL. Results for 1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene in E13-082812 were rejected (R).

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). The laboratory eliminated the low level standard from the IC for Acridine, Pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[e]pyrene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene and Benzo[g,h,i]perylene but did not adjust the reporting limit on the organic analysis report sheets. The actual reporting limits for Pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[e]pyrene and Benzo[a]pyrene were calculated by the validator and replaced on the report sheets. The reporting limits for Acridine, Indeno[1,2,3-cd]pyrene and Benzo[g,h,i]perylene were not adjusted because results for these compounds were previously rejected for unacceptable MS/MSD or LCS recoveries. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

All laboratory-reported MDLs were less than the project RL goal with the exception of Quinoline with the project RL goal at 5 ng/L and the MDL at 5.8 ng/L.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- The RLs for Acridine, Pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[e]pyrene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene and Benzo[g,h,i]perylene were reported incorrectly (section X).
- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument
- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

At the discretion of the data user, the laboratory may be requested to revise the data package, addressing these documentation issues, in order to ensure that complete and accurate information is available for any future distributions of the data package. Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[b]fluoranthene and Pyrene in E13-082812 in E13D-082812, and Naphthalene in E13D-082812, and results for

Benzo[b]fluoranthene, Benzo[g,h,i]perylene, Indeno[1,2,3-cd]pyrene and Naphthalene in E13FB-082812 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.

- Results for Benzo[a]pyrene in E13-282812 and E13D-082812 were qualified as not detected (U) at the RL due to sample concentration detected within five-times the concentration found in the field blank.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Perylene and Benzo[k]fluoranthene in all field samples were qualified as estimated low (L, UJ) and results for Benzo[g,h,i]perylene in E13-082812 and E13D-082812 and Dibenz[a,h]anthracene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery.
- Results for Acridine in all field samples were qualified as estimated (UJ) due to unacceptable LCS recovery.
- Results for Anthracene, Dibenzofuran and Fluorene in E13-082812 were qualified as not detected (U) at the sample-specific RL and results for 1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene in E13-082812 were rejected (R) due to imprecision in field duplicate samples.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semi-volatile data.

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: October 25, 2012

Job No. 280-32719-1

ddms Project No. 2006-0022

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-32719-1

Client Sample ID: E13-082812

Lab Sample ID: 280-32719-1

Date Sampled: 08/28/2012 0700

Client Matrix: Water

Date Received: 08/30/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-137487	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-135481	Lab File ID:	G5_7599.D
Dilution:	1.0			Initial Weight/Volume:	3998 mL
Analysis Date:	09/16/2012 1539			Final Weight/Volume:	1000 uL
Prep Date:	09/01/2012 1130			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	7.1		0.70	5.0
1-Methylnaphthalene	9.5 R		0.89	5.6
2-Methylnaphthalene	10 R		0.98	5.9
Acenaphthene	110		0.50	5.7
Acenaphthylene	12		0.77	4.8
Acridine	ND UJ	+	6.5	6.5
Anthracene	11 U	+	0.80	4.2
Benzo[a]anthracene	ND UJ		0.92	4.3
Benzo[a]pyrene	14 U	+	1.2	2.5
Benzo[e]pyrene	ND UJ		1.1	4.3
Benzo[b]fluoranthene	16 U	JB	1.4	4.7
Benzo(b)thiophene	ND		0.75	5.2
Benzo[k]fluoranthene	ND UJ		1.2	4.1
Benzo[g,h,i]perylene	ND R		1.2	6.2
Carbazole	ND		0.72	3.8
Chrysene	ND		1.2	5.6
Dibenz(a,h)anthracene	ND R		1.0	5.9
Dibenzofuran	10 U	+	0.99	5.7
Dibenzothiophene	2.6 J	+	0.98	4.1
Fluoranthene	ND		1.7	4.6
Fluorene	16 U	+	0.85	4.1
Indene	ND		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	ND R		1.3	5.4
Naphthalene	14 R	B	1.1	8.6
Perylene	ND UJ		3.8	3.8
Phenanthrene	ND		3.2	6.3
Pyrene	14 U	B	0.99	4.2
Quinoline	ND		5.7	9.0
Biphenyl	ND		1.1	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	77		23 - 84
Chrysene-d12 (Surr)	40		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

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2/23/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-32719-1

Client Sample ID: E13D-082812

Lab Sample ID: 280-32719-2FD

Date Sampled: 08/28/2012 0700

Client Matrix: Water

Date Received: 08/30/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-137487	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-135481	Lab File ID:	G5_7602.D
Dilution:	1.0			Initial Weight/Volume:	3659.2 mL
Analysis Date:	09/16/2012 1725			Final Weight/Volume:	1000 uL
Prep Date:	09/01/2012 1130			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.74	5.9
2,3-Dihydroindene	6.4		0.77	5.5
1-Methylnaphthalene	ND		0.97	6.1
2-Methylnaphthalene	ND		1.1	6.4
Acenaphthene	120		0.55	6.2
Acenaphthylene	9.7		0.84	5.2
Acridine	ND <i>UJ</i>	<i>—</i>	7.1	7.1
Anthracene	ND		0.87	4.6
Benzo[a]anthracene	ND		1.0	4.7
Benzo[a]pyrene	<i>14 U</i>	<i>↓</i>	1.4	2.7
Benzo[e]pyrene	ND <i>UJ</i>		1.2	4.7
Benzo[b]fluoranthene	<i>16 U</i>	<i>↓B</i>	1.5	5.1
Benzo(b)thiophene	ND		0.82	5.7
Benzo[k]fluoranthene	ND <i>UJ</i>		1.4	4.5
Benzo[g,h,i]perylene	ND <i>R</i>		1.3	6.8
Carbazole	ND		0.79	4.2
Chrysene	ND		1.4	6.1
Dibenz(a,h)anthracene	ND <i>R</i>		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	2.6 <i>J</i>	<i>↓</i>	1.1	4.5
Fluoranthene	ND		1.8	5.0
Fluorene	ND		0.93	4.5
Indene	ND		3.6	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.4	5.9
Naphthalene	<i>26 U</i>	<i>↓B</i>	1.2	9.4
Perylene	ND <i>UJ</i>		4.2	4.2
Phenanthrene	ND		3.5	6.9
Pyrene	<i>10 U</i>	<i>—</i>	1.1	4.6
Quinoline	ND		6.2	9.8
Biphenyl	ND		1.1	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	78		23 - 84
Chrysene-d12 (Surr)	30		28 - 101
Naphthalene-d8 (Surr)	84		22 - 97

John Rame
2/23/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-32719-1

Client Sample ID: E13FB-082812

Lab Sample ID: 280-32719-3FB

Date Sampled: 08/28/2012 0700

Client Matrix: Water

Date Received: 08/30/2012 0930

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-137487	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-135481	Lab File ID:	G5_7603.D
Dilution:	1.0			Initial Weight/Volume:	3853.7 mL
Analysis Date:	09/16/2012 1800			Final Weight/Volume:	1000 uL
Prep Date:	09/01/2012 1130			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.6
2,3-Dihydroindene	ND		0.73	5.2
1-Methylnaphthalene	ND		0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthene	ND		0.52	5.9
Acenaphthylene	ND		0.80	5.0
Acridine	ND <i>UJ</i>	<i>-</i>	6.7	6.7
Anthracene	ND		0.83	4.4
Benzo[a]anthracene	ND		0.95	4.5
Benzo[a]pyrene	1.5 <i>L</i>	<i>J</i>	1.3	2.6
Benzo[e]pyrene	ND <i>UJ</i>		1.2	4.5
Benzo[b]fluoranthene	1.8 <i>U</i>	<i>JB</i>	1.4	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	ND <i>UJ</i>		1.3	4.3
Benzo[g,h,i]perylene	1.3 <i>U</i>	<i>JB</i>	1.2	6.4
Carbazole	ND		0.75	3.9
Chrysene	ND		1.3	5.8
Dibenz(a,h)anthracene	ND <i>R</i>		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.88	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	1.3 <i>U</i>	<i>JB</i>	1.3	5.6
Naphthalene	1.8 <i>U</i>	<i>JB</i>	1.2	8.9
Perylene	ND <i>UJ</i>		4.0	4.0
Phenanthrene	ND		3.3	6.5
Pyrene	ND		1.0	4.4
Quinoline	ND		5.9	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	78		23 - 84
Chrysene-d12 (Surr)	87		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-33493-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

1217 Bandana Blvd North

Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

10/18/2012 8:37:16 AM

Lisa Uriell

Project Manager II

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Job ID: 280-33493-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-33493-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Eleven samples were received under chain of custody on September 20, 2012. The samples were received at temperatures of 1.3°C, 0.9°C, 0.5°C, 2.6°C, 1.4°C, 1.0°C and 1.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

The following samples exhibited surrogate recoveries outside the QC control limits, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

0987-09 SLP6 (280-33493-3) recovered Fluorene-d10 at 92% (limits 23-84%)
0987-09 SLP10T (280-33493-4) recovered Fluorene-d10 at 86% (limits 23-84%)
0987-09 W48 (280-33493-5) recovered Chrysene-d12 at 25% (limits 28-101%)
0987-09 W119 (280-33493-6) recovered Fluorene-d10 at 85% (limits 23-84%)
0987-09 SLP4 (280-33493-7) recovered Fluorene-d10 at 87% (limits 23-84%)
0987-09 W23 (280-33493-8) recovered Fluorene-d10 at 88% (limits 23-84%)
0987-09 E7D (280-33493-10) recovered Fluorene-d10 at 88% (limits 23-84%)
0987-09 E7FB (280-33493-11) recovered Chrysene-d12 at 105% (limits 28-101%)

Sample 0987-09 W23 (280-33493-8) was analyzed at a 1X, a 10X and a 20X dilution to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Only those compounds that were within the linear range were reported in each dilution in order to achieve the lowest reporting limits possible within the constraints of the method. Surrogate recoveries could not be calculated for the analyses performed at a dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

Low levels of Benzo[g,h,i]perylene and Naphthalene are present in the method blank associated with prep batch 280-138557. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the method blank

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Job ID: 280-33493-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

associated with prep batch 280-138557 as detailed below. This is an indicator that data may be biased high. As no detectable concentrations are present above the reporting limits in the method blank, corrective action is deemed unnecessary.

Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 87% (limits 23-84%)

Surrogate Chrysene-d12 was recovered at 104% (limits 28-101%)

Low levels of Benzo[g,h,i]perylene and Indeno[1,2,3-cd]pyrene are present in the method blank associated with prep batch 280-139011. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, surrogates Fluorene-d10, Chrysene-d12 and Naphthalene-d8 were recovered above the QC control limits in the method blank associated with prep batch 280-139011 as detailed below. This is an indicator that data may be biased high. As no detectable concentrations are present above the reporting limits in the method blank, corrective action is deemed unnecessary.

Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 87% (limits 23-84%)

Surrogate Chrysene-d12 was recovered at 104% (limits 28-101%)

Surrogate Naphthalene-d8 was recovered at 99% (limits 22-97%)

The LCS/LCSD associated with prep batch 280-138557 exhibited the LCSD percent recovery below the QC control limits for Acridine at 13% (limits 30-150%). Additionally, the LCS/LCSD exhibited the relative percent difference (RPD) data outside the QC control limits for Acridine. The LCS/LCSD was re-aliquoted and re-analyzed with similar results. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the LCSD associated with prep batch 280-138557 as detailed below. The acceptable LCS surrogate recoveries provide evidence that the laboratory is performing the method within acceptable guidelines. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 86% (limits 23-84%)

Surrogate Chrysene-d12 was recovered at 103% (limits 28-101%)

The LCS associated with prep batch 280-139011 exhibited percent recoveries outside the QC control limits for Acridine at 20% (limits 30-150%), Indene at 91% (limits 22-86%), Naphthalene at 101% (limits 27-95%) and 7,12-Dimethylbenz(a)anthracene at 26% (limits 30-150%). 7,12-Dimethylbenz(a)anthracene is not a compound of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the LCS associated with prep batch 280-139011 as detailed below. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 86% (limits 23-84%)

Surrogate Chrysene-d12 was recovered at 105% (limits 28-101%)

The method required MS/MSD could not be performed for prep batch 280-138557, due to insufficient sample volume.

The MS/MSD associated with prep batch 280-139011 was performed using sample 0987-09 E7 (280-33493-9), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 10 of the 33 Matrix Spike Duplicate compound recoveries and 1 of the 3 surrogate recoveries outside the

Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

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Laboratory: TestAmerica Denver (Continued)

control limits. The MS/MSD exhibited percent recoveries and/or RPD data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylcholanthrene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indene	Indeno[1,2,3-cd]pyrene
Perylene	Fluorene-d10	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-33493-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	62
MB Surrogates	6	1
LCS/LCSD	21	19
LCS/LCSD Surrogates	9	5
FB	31	31
MS	7	6
MS Surrogates	3	2
MSD	7	5
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	33	25
Samples and QC Internal Standard Area	162	162
TOTAL	382	358
% Completeness	93.7%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-33493-1					
Sample: 0987-09 E7		DUP: 0987-09 E7D			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	8.6	Acenaphthene	9.6	11.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	1.7	Anthracene	1.7	0.0	
Benzo(a)anthracene	1.5	Benzo(a)anthracene	1.0	40.0	
Benzo(b)fluoranthene	2.0	Benzo(b)fluoranthene	ND	NC	
Benzo(k)fluoranthene	2.2	Benzo(k)fluoranthene	1.5	37.8	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	2.7	Benzo(ghi)perylene	2.3	16.0	
Benzo(a)pyrene	1.4	Benzo(a)pyrene	1.3	7.4	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	3.1	Benzo(b)thiophene	3.5	12.1	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	1.1	Carbazole	1.2	8.7	
Chrysene	1.9	Chrysene	ND	NC	
Dibenz(a,h)anthracene	2.3	Dibenz(a,h)anthracene	1.5	42.1	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	3.8	2,3-Dihydroindene	4.5	16.9	
Fluoranthene	2.3	Fluoranthene	1.8	24.4	
Fluorene	ND	Fluorene	ND	0.0	
Indene	6.1	Indene	6.5	6.3	
Indeno(1,2,3-cd)pyrene	2.8	Indeno(1,2,3-cd)pyrene	2.1	28.6	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	1.7	NC	
1-Methylnaphthalene	1.1	1-Methylnaphthalene	1.5	30.8	
Naphthalene	4.1	Naphthalene	6.8	49.5	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	2.6	Pyrene	2.4	8.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W105

Lab Sample ID: 280-33493-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	53		5.0	0.70	ng/L		1		8270C SIM	Total/NA
1-Methylnaphthalene	32		5.6	0.89	ng/L		1		8270C SIM	Total/NA
2-Methylnaphthalene	16		5.9	0.98	ng/L		1		8270C SIM	Total/NA
Acenaphthene	110		5.7	0.50	ng/L		1		8270C SIM	Total/NA
Acenaphthylene	10		4.8	0.77	ng/L		1		8270C SIM	Total/NA
Anthracene	15		4.2	0.80	ng/L		1		8270C SIM	Total/NA
Benzo[a]anthracene	18		4.3	0.92	ng/L		1		8270C SIM	Total/NA
Benzo[a]pyrene	1.6	J	2.5	1.2	ng/L		1		8270C SIM	Total/NA
Benzo[e]pyrene	1.1	J	4.3	1.1	ng/L		1		8270C SIM	Total/NA
Benzo[b]fluoranthene	1.9	J	4.7	1.4	ng/L		1		8270C SIM	Total/NA
Benzo(b)thiophene	12		5.2	0.75	ng/L		1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.3	J B	6.2	1.2	ng/L		1		8270C SIM	Total/NA
Carbazole	9.3		3.8	0.72	ng/L		1		8270C SIM	Total/NA
Chrysene	11		5.6	1.2	ng/L		1		8270C SIM	Total/NA
Dibenzofuran	30		5.7	0.99	ng/L		1		8270C SIM	Total/NA
Dibenzothiophene	11		4.1	0.98	ng/L		1		8270C SIM	Total/NA
Fluoranthene	240		4.6	1.7	ng/L		1		8270C SIM	Total/NA
Fluorene	73		4.1	0.85	ng/L		1		8270C SIM	Total/NA
Indene	5.3		4.7	3.3	ng/L		1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.3	J	5.4	1.3	ng/L		1		8270C SIM	Total/NA
Naphthalene	35	B	8.6	1.1	ng/L		1		8270C SIM	Total/NA
Phenanthrene	67		6.3	3.2	ng/L		1		8270C SIM	Total/NA
Pyrene	200		4.2	0.99	ng/L		1		8270C SIM	Total/NA
Biphenyl	24		5.6	1.1	ng/L		1		8270C SIM	Total/NA

Client Sample ID: 0987-09 E13

Lab Sample ID: 280-33493-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	6.3		5.0	0.70	ng/L		1		8270C SIM	Total/NA
Acenaphthene	120		5.7	0.50	ng/L		1		8270C SIM	Total/NA
Acenaphthylene	9.4		4.8	0.77	ng/L		1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.4	J B	6.2	1.2	ng/L		1		8270C SIM	Total/NA
Dibenzothiophene	2.8	J	4.1	0.99	ng/L		1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.3	J	5.4	1.3	ng/L		1		8270C SIM	Total/NA
Naphthalene	2.2	J B	8.6	1.1	ng/L		1		8270C SIM	Total/NA
Pyrene	12		4.2	1.0	ng/L		1		8270C SIM	Total/NA

Client Sample ID: 0987-09 SLP6

Lab Sample ID: 280-33493-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Benzofuran	0.90	J	5.6	0.71	ng/L		1		8270C SIM	Total/NA
2,3-Dihydroindene	59		5.2	0.73	ng/L		1		8270C SIM	Total/NA
1-Methylnaphthalene	2.3	J	5.9	0.93	ng/L		1		8270C SIM	Total/NA
2-Methylnaphthalene	1.5	J	6.2	1.0	ng/L		1		8270C SIM	Total/NA
Acenaphthene	83		6.0	0.52	ng/L		1		8270C SIM	Total/NA
Acenaphthylene	10		5.0	0.80	ng/L		1		8270C SIM	Total/NA
Acridine	14	*	6.8	6.8	ng/L		1		8270C SIM	Total/NA
Anthracene	3.3	J	4.4	0.84	ng/L		1		8270C SIM	Total/NA
Benzo(b)thiophene	12		5.4	0.78	ng/L		1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.5	J B	6.5	1.2	ng/L		1		8270C SIM	Total/NA
Carbazole	3.2	J	4.0	0.75	ng/L		1		8270C SIM	Total/NA
Dibenzothiophene	2.4	J	4.3	1.0	ng/L		1		8270C SIM	Total/NA
Fluoranthene	3.6	J	4.8	1.8	ng/L		1		8270C SIM	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP6 (Continued)

Lab Sample ID: 280-33493-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indene	7.5		4.9	3.4	ng/L	1		8270C SIM	Total/NA
Indole	2.9	J	4.9	1.8	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.5	J	5.6	1.3	ng/L	1		8270C SIM	Total/NA
Naphthalene	7.1	J B	9.0	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	6.2		4.4	1.0	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 SLP10T

Lab Sample ID: 280-33493-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	35		4.9	0.69	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	7.3		5.5	0.88	ng/L	1		8270C SIM	Total/NA
Acenaphthene	42		5.6	0.49	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	1.8	J	4.7	0.76	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	4.0	J	5.1	0.74	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.5	J B	6.1	1.2	ng/L	1		8270C SIM	Total/NA
Carbazole	0.74	J	3.7	0.71	ng/L	1		8270C SIM	Total/NA
Fluorene	2.8	J	4.0	0.84	ng/L	1		8270C SIM	Total/NA
Indene	4.4	J	4.6	3.2	ng/L	1		8270C SIM	Total/NA
Indole	3.0	J	4.6	1.7	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.4	J	5.3	1.2	ng/L	1		8270C SIM	Total/NA
Naphthalene	2.0	J B	8.5	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W48

Lab Sample ID: 280-33493-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.2	J	5.8	0.73	ng/L	1		8270C SIM	Total/NA
2,3-Dihydroindene	5.6		5.4	0.75	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	4.0	J	6.0	0.96	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	2.5	J	6.3	1.1	ng/L	1		8270C SIM	Total/NA
Acenaphthene	92		6.1	0.54	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	4.3	J	5.2	0.83	ng/L	1		8270C SIM	Total/NA
Acridine	7.1	*	7.0	7.0	ng/L	1		8270C SIM	Total/NA
Anthracene	4.2	J	4.5	0.86	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	12		5.6	0.81	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.5	J B	6.7	1.3	ng/L	1		8270C SIM	Total/NA
Carbazole	1.5	J	4.1	0.77	ng/L	1		8270C SIM	Total/NA
Dibenzothiophene	1.3	J	4.4	1.1	ng/L	1		8270C SIM	Total/NA
Indene	47		5.1	3.5	ng/L	1		8270C SIM	Total/NA
Indole	2.3	J	5.1	1.9	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.5	J	5.8	1.4	ng/L	1		8270C SIM	Total/NA
Naphthalene	6.3	J B	9.2	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	2.9	J	4.5	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W119

Lab Sample ID: 280-33493-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	5.3		5.1	0.72	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.7	J	5.7	0.91	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	1.6	J	6.1	1.0	ng/L	1		8270C SIM	Total/NA
Acenaphthene	16		5.8	0.51	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	1.2	J	4.9	0.79	ng/L	1		8270C SIM	Total/NA
Acridine	7.1	*	6.7	6.7	ng/L	1		8270C SIM	Total/NA
Anthracene	3.0	J	4.3	0.82	ng/L	1		8270C SIM	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W119 (Continued)

Lab Sample ID: 280-33493-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo(b)thiophene	4.6	J	5.3	0.77	ng/L	1			8270C SIM	Total/NA
Benzo(g,h,i)perylene	1.7	J B	6.4	1.2	ng/L	1			8270C SIM	Total/NA
Carbazole	1.3	J	3.9	0.74	ng/L	1			8270C SIM	Total/NA
Indene	9.9	*	4.8	3.4	ng/L	1			8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.6	J B	5.5	1.3	ng/L	1			8270C SIM	Total/NA
Naphthalene	5.5	J *	8.8	1.2	ng/L	1			8270C SIM	Total/NA
Pyrene	12		4.3	1.0	ng/L	1			8270C SIM	Total/NA

Client Sample ID: 0987-09 SLP4

Lab Sample ID: 280-33493-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	40		4.9	0.69	ng/L	1			8270C SIM	Total/NA
Acenaphthene	56		5.6	0.49	ng/L	1			8270C SIM	Total/NA
Acenaphthylene	4.2	J	4.7	0.75	ng/L	1			8270C SIM	Total/NA
Anthracene	2.0	J	4.1	0.78	ng/L	1			8270C SIM	Total/NA
Benzo(b)thiophene	6.3		5.1	0.73	ng/L	1			8270C SIM	Total/NA
Benzo(g,h,i)perylene	1.6	J B	6.1	1.1	ng/L	1			8270C SIM	Total/NA
Carbazole	5.5		3.7	0.71	ng/L	1			8270C SIM	Total/NA
Dibenzofuran	1.1	J	5.6	0.97	ng/L	1			8270C SIM	Total/NA
Fluoranthene	2.3	J	4.5	1.7	ng/L	1			8270C SIM	Total/NA
Fluorene	2.5	J	4.0	0.83	ng/L	1			8270C SIM	Total/NA
Indene	4.0	J *	4.6	3.2	ng/L	1			8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.7	J B	5.3	1.2	ng/L	1			8270C SIM	Total/NA
Naphthalene	3.9	J *	8.4	1.1	ng/L	1			8270C SIM	Total/NA
Phenanthrene	3.5	J	6.2	3.1	ng/L	1			8270C SIM	Total/NA
Pyrene	9.2		4.1	0.97	ng/L	1			8270C SIM	Total/NA

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Benzofuran	2.5	J	5.7	0.72	ng/L	1			8270C SIM	Total/NA
Acenaphthylene	140		5.1	0.81	ng/L	1			8270C SIM	Total/NA
Acridine	310	*	6.9	6.9	ng/L	1			8270C SIM	Total/NA
Anthracene	210		4.4	0.84	ng/L	1			8270C SIM	Total/NA
Benzo[a]anthracene	190		4.5	0.97	ng/L	1			8270C SIM	Total/NA
Benzo[a]pyrene	10		2.6	1.3	ng/L	1			8270C SIM	Total/NA
Benzo[e]pyrene	7.3		4.5	1.2	ng/L	1			8270C SIM	Total/NA
Benzo[b]fluoranthene	23		5.0	1.5	ng/L	1			8270C SIM	Total/NA
Benzo(b)thiophene	83		5.5	0.79	ng/L	1			8270C SIM	Total/NA
Benzo(g,h,i)perylene	2.1	J B	6.5	1.2	ng/L	1			8270C SIM	Total/NA
Carbazole	170		4.0	0.76	ng/L	1			8270C SIM	Total/NA
Chrysene	110		5.9	1.3	ng/L	1			8270C SIM	Total/NA
Dibenz(a,h)anthracene	1.2	J	6.2	1.1	ng/L	1			8270C SIM	Total/NA
Indene	55	*	5.0	3.5	ng/L	1			8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.2	J B	5.7	1.3	ng/L	1			8270C SIM	Total/NA
Quinoline	24		9.5	6.0	ng/L	1			8270C SIM	Total/NA
2,3-Dihydroindene - DL	410		53	7.4	ng/L	10			8270C SIM	Total/NA
1-Methylnaphthalene - DL	1200		59	9.4	ng/L	10			8270C SIM	Total/NA
2-Methylnaphthalene - DL	640		62	10	ng/L	10			8270C SIM	Total/NA
Dibenzofuran - DL	1000		60	10	ng/L	10			8270C SIM	Total/NA
Dibenzothiophene - DL	380		43	10	ng/L	10			8270C SIM	Total/NA
Fluoranthene - DL	1800		49	18	ng/L	10			8270C SIM	Total/NA
Fluorene - DL	2500		43	9.0	ng/L	10			8270C SIM	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W23 (Continued)

Lab Sample ID: 280-33493-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene - DL	1600	*	91	12	ng/L	10		8270C SIM	Total/NA
Phenanthrene - DL	1300		66	34	ng/L	10		8270C SIM	Total/NA
Pyrene - DL	1700		44	10	ng/L	10		8270C SIM	Total/NA
Biphenyl - DL	520		59	11	ng/L	10		8270C SIM	Total/NA
Acenaphthene - DL2	3100		120	11	ng/L	20		8270C SIM	Total/NA

Client Sample ID: 0987-09 E7

Lab Sample ID: 280-33493-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	3.8	J	5.1	0.71	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.1	J	5.7	0.91	ng/L	1		8270C SIM	Total/NA
Acenaphthene	8.6		5.8	0.51	ng/L	1		8270C SIM	Total/NA
Anthracene	1.7	J	4.3	0.81	ng/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	1.5	J	4.4	0.94	ng/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	1.4	J	2.5	1.3	ng/L	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	2.0	J	4.8	1.4	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	3.1	J	5.3	0.76	ng/L	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	2.2	J	4.2	1.3	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	2.7	J B	6.3	1.2	ng/L	1		8270C SIM	Total/NA
Carbazole	1.1	J	3.9	0.73	ng/L	1		8270C SIM	Total/NA
Chrysene	1.9	J	5.7	1.3	ng/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	2.3	J	6.0	1.1	ng/L	1		8270C SIM	Total/NA
Fluoranthene	2.3	J	4.7	1.7	ng/L	1		8270C SIM	Total/NA
Indene	6.1	*	4.8	3.3	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.8	J B	5.5	1.3	ng/L	1		8270C SIM	Total/NA
Naphthalene	4.1	J *	8.8	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	2.6	J	4.3	1.0	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	4.5	J	5.4	0.76	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.5	J	6.1	0.97	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	1.7	J	6.4	1.1	ng/L	1		8270C SIM	Total/NA
Acenaphthene	9.6		6.2	0.54	ng/L	1		8270C SIM	Total/NA
Anthracene	1.7	J	4.6	0.87	ng/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	1.0	J	4.7	1.0	ng/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	1.3	J	2.7	1.3	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	3.5	J	5.6	0.81	ng/L	1		8270C SIM	Total/NA
Benzo[k]fluoranthene	1.5	J	4.4	1.3	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	2.3	J B	6.7	1.3	ng/L	1		8270C SIM	Total/NA
Carbazole	1.2	J	4.1	0.78	ng/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	1.5	J	6.4	1.1	ng/L	1		8270C SIM	Total/NA
Fluoranthene	1.8	J	5.0	1.8	ng/L	1		8270C SIM	Total/NA
Indene	6.5	*	5.1	3.6	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.1	J B	5.9	1.4	ng/L	1		8270C SIM	Total/NA
Naphthalene	6.8	J *	9.3	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	2.4	J	4.6	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 E7FB

Lab Sample ID: 280-33493-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	2.2	J B	7.9	1.5	ng/L	1		8270C SIM	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7FB (Continued)

Lab Sample ID: 280-33493-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indeno[1,2,3-cd]pyrene	1.9	J B	6.9	1.6	ng/L	1		8270C SIM	Total/NA
Naphthalene	2.7	J *	11	1.5	ng/L	1		8270C SIM	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method	Method Description	Protocol	Laboratory
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-33493-1	0987-09 W105	Water	09/19/12 08:40	09/20/12 09:30
280-33493-2	0987-09 E13	Water	09/19/12 12:09	09/20/12 09:30
280-33493-3	0987-09 SLP6	Water	09/19/12 13:21	09/20/12 09:30
280-33493-4	0987-09 SLP10T	Water	09/19/12 08:13	09/20/12 09:30
280-33493-5	0987-09 W48	Water	09/19/12 10:50	09/20/12 09:30
280-33493-6	0987-09 W119	Water	09/19/12 10:10	09/20/12 09:30
280-33493-7	0987-09 SLP4	Water	09/19/12 09:28	09/20/12 09:30
280-33493-8	0987-09 W23	Water	09/19/12 08:50	09/20/12 09:30
280-33493-9	0987-09 E7	Water	09/19/12 12:35	09/20/12 09:30
280-33493-10	0987-09 E7D	Water	09/19/12 12:35	09/20/12 09:30
280-33493-11	0987-09 E7FB	Water	09/19/12 12:35	09/20/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W105

Lab Sample ID: 280-33493-1

Date Collected: 09/19/12 08:40

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 22:31	1
2,3-Dihydroindene	53		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 22:31	1
1-Methylnaphthalene	32		5.6	0.89	ng/L		09/22/12 12:15	10/11/12 22:31	1
2-Methylnaphthalene	16		5.9	0.98	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acenaphthene	110		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acenaphthylene	10		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acridine	ND	*	6.5	6.5	ng/L		09/22/12 12:15	10/11/12 22:31	1
Anthracene	15		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[a]anthracene	18		4.3	0.92	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[a]pyrene	1.6	J	2.5	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[e]pyrene	1.1	J	4.3	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[b]fluoranthene	1.9	J	4.7	1.4	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo(b)thiophene	12		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[g,h,i]perylene	1.3	J B	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Carbazole	9.3		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 22:31	1
Chrysene	11		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenzofuran	30		5.7	0.99	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenzothiophene	11		4.1	0.98	ng/L		09/22/12 12:15	10/11/12 22:31	1
Fluoranthene	240		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Fluorene	73		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indene	5.3		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indeno[1,2,3-cd]pyrene	1.3	J	5.4	1.3	ng/L		09/22/12 12:15	10/11/12 22:31	1
Naphthalene	35	B	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 22:31	1
Phenanthrene	67		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Pyrene	200		4.2	0.99	ng/L		09/22/12 12:15	10/11/12 22:31	1
Quinoline	ND		9.0	5.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Biphenyl	24		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	82		23 - 84	09/22/12 12:15	10/11/12 22:31	1
Chrysene-d12 (Surr)	50		28 - 101	09/22/12 12:15	10/11/12 22:31	1
Naphthalene-d8 (Surr)	85		22 - 97	09/22/12 12:15	10/11/12 22:31	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E13

Lab Sample ID: 280-33493-2

Date Collected: 09/19/12 12:09

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 23:10	1
2,3-Dihydroindene	6.3		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 23:10	1
1-Methylnaphthalene	ND		5.6	0.90	ng/L		09/22/12 12:15	10/11/12 23:10	1
2-Methylnaphthalene	ND		5.9	0.99	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acenaphthene	120		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acenaphthylene	9.4		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acridine	ND	*	6.5	6.5	ng/L		09/22/12 12:15	10/11/12 23:10	1
Anthracene	ND		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[a]anthracene	ND		4.3	0.93	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[g,h,i]perylene	1.4	J B	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Carbazole	ND		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 23:10	1
Chrysene	ND		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenzofuran	ND		5.7	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenzothiophene	2.8	J	4.1	0.99	ng/L		09/22/12 12:15	10/11/12 23:10	1
Fluoranthene	ND		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Fluorene	ND		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indene	ND		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indeno[1,2,3-cd]pyrene	1.3	J	5.4	1.3	ng/L		09/22/12 12:15	10/11/12 23:10	1
Naphthalene	2.2	J B	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 23:10	1
Phenanthrene	ND		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Pyrene	12		4.2	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Quinoline	ND		9.1	5.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Biphenyl	ND		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	82		23 - 84	09/22/12 12:15	10/11/12 23:10	1
Chrysene-d12 (Surr)	51		28 - 101	09/22/12 12:15	10/11/12 23:10	1
Naphthalene-d8 (Surr)	85		22 - 97	09/22/12 12:15	10/11/12 23:10	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP6

Lab Sample ID: 280-33493-3

Date Collected: 09/19/12 13:21

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.90	J	5.6	0.71	ng/L		09/22/12 12:15	10/11/12 23:48	1
2,3-Dihydroindene	59		5.2	0.73	ng/L		09/22/12 12:15	10/11/12 23:48	1
1-Methylnaphthalene	2.3	J	5.9	0.93	ng/L		09/22/12 12:15	10/11/12 23:48	1
2-Methylnaphthalene	1.5	J	6.2	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acenaphthene	83		6.0	0.52	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acenaphthylene	10		5.0	0.80	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acridine	14	*	6.8	6.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Anthracene	3.3	J	4.4	0.84	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[a]anthracene	ND		4.5	0.96	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo(b)thiophene	12		5.4	0.78	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[g,h,i]perylene	1.5	J B	6.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Carbazole	3.2	J	4.0	0.75	ng/L		09/22/12 12:15	10/11/12 23:48	1
Chrysene	ND		5.9	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenzofuran	ND		6.0	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenzothiophene	2.4	J	4.3	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Fluoranthene	3.6	J	4.8	1.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Fluorene	ND		4.3	0.89	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indene	7.5		4.9	3.4	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indole	2.9	J	4.9	1.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indeno[1,2,3-cd]pyrene	1.5	J	5.6	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Naphthalene	7.1	J B	9.0	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Perylene	ND		4.0	4.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Phenanthrene	ND		6.6	3.4	ng/L		09/22/12 12:15	10/11/12 23:48	1
Pyrene	6.2		4.4	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Quinoline	ND		9.4	5.9	ng/L		09/22/12 12:15	10/11/12 23:48	1
Biphenyl	ND		5.9	1.1	ng/L		09/22/12 12:15	10/11/12 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	92	X	23 - 84	09/22/12 12:15	10/11/12 23:48	1
Chrysene-d12 (Surr)	69		28 - 101	09/22/12 12:15	10/11/12 23:48	1
Naphthalene-d8 (Surr)	89		22 - 97	09/22/12 12:15	10/11/12 23:48	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP10T

Lab Sample ID: 280-33493-4

Date Collected: 09/19/12 08:13

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.3	0.67	ng/L		09/22/12 12:15	10/12/12 00:27	1
2,3-Dihydroindene	35		4.9	0.69	ng/L		09/22/12 12:15	10/12/12 00:27	1
1-Methylnaphthalene	7.3		5.5	0.88	ng/L		09/22/12 12:15	10/12/12 00:27	1
2-Methylnaphthalene	ND		5.8	0.96	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acenaphthene	42		5.6	0.49	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acenaphthylene	1.8	J	4.7	0.76	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acridine	ND	*	6.4	6.4	ng/L		09/22/12 12:15	10/12/12 00:27	1
Anthracene	ND		4.1	0.79	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[a]anthracene	ND		4.2	0.91	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[e]pyrene	ND		4.2	1.1	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[b]fluoranthene	ND		4.6	1.4	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo(b)thiophene	4.0	J	5.1	0.74	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[k]fluoranthene	ND		4.0	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[g,h,i]perylene	1.5	J B	6.1	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Carbazole	0.74	J	3.7	0.71	ng/L		09/22/12 12:15	10/12/12 00:27	1
Chrysene	ND		5.5	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenz(a,h)anthracene	ND		5.8	1.0	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenzofuran	ND		5.6	0.97	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenzothiophene	ND		4.0	0.96	ng/L		09/22/12 12:15	10/12/12 00:27	1
Fluoranthene	ND		4.5	1.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Fluorene	2.8	J	4.0	0.84	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indene	4.4	J	4.6	3.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indole	3.0	J	4.6	1.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indeno[1,2,3-cd]pyrene	1.4	J	5.3	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Naphthalene	2.0	J B	8.5	1.1	ng/L		09/22/12 12:15	10/12/12 00:27	1
Perylene	ND		3.7	3.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Phenanthrene	ND		6.2	3.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Pyrene	ND		4.1	0.97	ng/L		09/22/12 12:15	10/12/12 00:27	1
Quinoline	ND		8.9	5.6	ng/L		09/22/12 12:15	10/12/12 00:27	1
Biphenyl	ND		5.5	1.0	ng/L		09/22/12 12:15	10/12/12 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	86	X	23 - 84	09/22/12 12:15	10/12/12 00:27	1
Chrysene-d12 (Surr)	61		28 - 101	09/22/12 12:15	10/12/12 00:27	1
Naphthalene-d8 (Surr)	89		22 - 97	09/22/12 12:15	10/12/12 00:27	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W48

Lab Sample ID: 280-33493-5

Date Collected: 09/19/12 10:50

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.2	J	5.8	0.73	ng/L		09/22/12 12:15	10/12/12 01:06	1
2,3-Dihydroindene	5.6		5.4	0.75	ng/L		09/22/12 12:15	10/12/12 01:06	1
1-Methylnaphthalene	4.0	J	6.0	0.96	ng/L		09/22/12 12:15	10/12/12 01:06	1
2-Methylnaphthalene	2.5	J	6.3	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acenaphthene	92		6.1	0.54	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acenaphthylene	4.3	J	5.2	0.83	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acridine	7.1	*	7.0	7.0	ng/L		09/22/12 12:15	10/12/12 01:06	1
Anthracene	4.2	J	4.5	0.86	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo(b)thiophene	12		5.6	0.81	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[g,h,i]perylene	1.5	J B	6.7	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Carbazole	1.5	J	4.1	0.77	ng/L		09/22/12 12:15	10/12/12 01:06	1
Chrysene	ND		6.0	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenzofuran	ND		6.1	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenzothiophene	1.3	J	4.4	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Fluoranthene	ND		4.9	1.8	ng/L		09/22/12 12:15	10/12/12 01:06	1
Fluorene	ND		4.4	0.91	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indene	47		5.1	3.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indole	2.3	J	5.1	1.9	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indeno[1,2,3-cd]pyrene	1.5	J	5.8	1.4	ng/L		09/22/12 12:15	10/12/12 01:06	1
Naphthalene	6.3	J B	9.2	1.2	ng/L		09/22/12 12:15	10/12/12 01:06	1
Perylene	ND		4.1	4.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Phenanthrene	ND		6.8	3.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Pyrene	2.9	J	4.5	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Quinoline	ND		9.7	6.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Biphenyl	ND		6.0	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	81		23 - 84	09/22/12 12:15	10/12/12 01:06	1
Chrysene-d12 (Surr)	25	X	28 - 101	09/22/12 12:15	10/12/12 01:06	1
Naphthalene-d8 (Surr)	82		22 - 97	09/22/12 12:15	10/12/12 01:06	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W119

Lab Sample ID: 280-33493-6

Date Collected: 09/19/12 10:10

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.70	ng/L		09/25/12 18:36	10/15/12 14:48	1
2,3-Dihydroindene	5.3		5.1	0.72	ng/L		09/25/12 18:36	10/15/12 14:48	1
1-Methylnaphthalene	1.7	J	5.7	0.91	ng/L		09/25/12 18:36	10/15/12 14:48	1
2-Methylnaphthalene	1.6	J	6.1	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acenaphthene	16		5.8	0.51	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acenaphthylene	1.2	J	4.9	0.79	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acridine	7.1	*	6.7	6.7	ng/L		09/25/12 18:36	10/15/12 14:48	1
Anthracene	3.0	J	4.3	0.82	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[a]anthracene	ND		4.4	0.94	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[b]fluoranthene	ND		4.8	1.4	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo(b)thiophene	4.6	J	5.3	0.77	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[g,h,i]perylene	1.7	J B	6.4	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Carbazole	1.3	J	3.9	0.74	ng/L		09/25/12 18:36	10/15/12 14:48	1
Chrysene	ND		5.7	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenzofuran	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenzothiophene	ND		4.2	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Fluoranthene	ND		4.7	1.7	ng/L		09/25/12 18:36	10/15/12 14:48	1
Fluorene	ND		4.2	0.87	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indene	9.9	*	4.8	3.4	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indole	ND		4.8	1.8	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indeno[1,2,3-cd]pyrene	1.6	J B	5.5	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Naphthalene	5.5	J *	8.8	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Perylene	ND		3.9	3.9	ng/L		09/25/12 18:36	10/15/12 14:48	1
Phenanthrene	ND		6.5	3.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Pyrene	12		4.3	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Quinoline	ND		9.2	5.8	ng/L		09/25/12 18:36	10/15/12 14:48	1
Biphenyl	ND		5.7	1.1	ng/L		09/25/12 18:36	10/15/12 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	85	X	23 - 84	09/25/12 18:36	10/15/12 14:48	1
Chrysene-d12 (Surr)	28		28 - 101	09/25/12 18:36	10/15/12 14:48	1
Naphthalene-d8 (Surr)	85		22 - 97	09/25/12 18:36	10/15/12 14:48	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP4

Lab Sample ID: 280-33493-7

Date Collected: 09/19/12 09:28

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.3	0.67	ng/L		09/25/12 18:36	10/15/12 15:27	1
2,3-Dihydroindene	40		4.9	0.69	ng/L		09/25/12 18:36	10/15/12 15:27	1
1-Methylnaphthalene	ND		5.5	0.87	ng/L		09/25/12 18:36	10/15/12 15:27	1
2-Methylnaphthalene	ND		5.8	0.96	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acenaphthene	56		5.6	0.49	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acenaphthylene	4.2	J	4.7	0.75	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acridine	ND	*	6.4	6.4	ng/L		09/25/12 18:36	10/15/12 15:27	1
Anthracene	2.0	J	4.1	0.78	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[a]anthracene	ND		4.2	0.90	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[a]pyrene	ND		2.4	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[e]pyrene	ND		4.2	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[b]fluoranthene	ND		4.6	1.4	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo(b)thiophene	6.3		5.1	0.73	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[k]fluoranthene	ND		4.0	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[g,h,i]perylene	1.6	J B	6.1	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Carbazole	5.5		3.7	0.71	ng/L		09/25/12 18:36	10/15/12 15:27	1
Chrysene	ND		5.5	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenz(a,h)anthracene	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenzofuran	1.1	J	5.6	0.97	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenzothiophene	ND		4.0	0.96	ng/L		09/25/12 18:36	10/15/12 15:27	1
Fluoranthene	2.3	J	4.5	1.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Fluorene	2.5	J	4.0	0.83	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indene	4.0	J *	4.6	3.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indole	ND		4.6	1.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indeno[1,2,3-cd]pyrene	1.7	J B	5.3	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Naphthalene	3.9	J *	8.4	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Perylene	ND		3.7	3.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Phenanthrene	3.5	J	6.2	3.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Pyrene	9.2		4.1	0.97	ng/L		09/25/12 18:36	10/15/12 15:27	1
Quinoline	ND		8.8	5.5	ng/L		09/25/12 18:36	10/15/12 15:27	1
Biphenyl	ND		5.5	1.0	ng/L		09/25/12 18:36	10/15/12 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	X	23 - 84	09/25/12 18:36	10/15/12 15:27	1
Chrysene-d12 (Surr)	69		28 - 101	09/25/12 18:36	10/15/12 15:27	1
Naphthalene-d8 (Surr)	84		22 - 97	09/25/12 18:36	10/15/12 15:27	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Date Collected: 09/19/12 08:50

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	2.5	J	5.7	0.72	ng/L		09/25/12 18:36	10/15/12 16:07	1
Acenaphthylene	140		5.1	0.81	ng/L		09/25/12 18:36	10/15/12 16:07	1
Acridine	310	*	6.9	6.9	ng/L		09/25/12 18:36	10/15/12 16:07	1
Anthracene	210		4.4	0.84	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[a]anthracene	190		4.5	0.97	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[a]pyrene	10		2.6	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[e]pyrene	7.3		4.5	1.2	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[b]fluoranthene	23		5.0	1.5	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo(b)thiophene	83		5.5	0.79	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[g,h,i]perylene	2.1	J B	6.5	1.2	ng/L		09/25/12 18:36	10/15/12 16:07	1
Carbazole	170		4.0	0.76	ng/L		09/25/12 18:36	10/15/12 16:07	1
Chrysene	110		5.9	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Dibenz(a,h)anthracene	1.2	J	6.2	1.1	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indene	55	*	5.0	3.5	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indole	ND		5.0	1.8	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indeno[1,2,3-cd]pyrene	2.2	J B	5.7	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Perylene	ND		4.0	4.0	ng/L		09/25/12 18:36	10/15/12 16:07	1
Quinoline	24		9.5	6.0	ng/L		09/25/12 18:36	10/15/12 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	88	X	23 - 84	09/25/12 18:36	10/15/12 16:07	1
Chrysene-d12 (Surr)	57		28 - 101	09/25/12 18:36	10/15/12 16:07	1
Naphthalene-d8 (Surr)	77		22 - 97	09/25/12 18:36	10/15/12 16:07	1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Dihydroindene	410		53	7.4	ng/L		09/25/12 18:36	10/16/12 15:20	10
1-Methylnaphthalene	1200		59	9.4	ng/L		09/25/12 18:36	10/16/12 15:20	10
2-Methylnaphthalene	640		62	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Dibenzofuran	1000		60	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Dibenzothiophene	380		43	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Fluoranthene	1800		49	18	ng/L		09/25/12 18:36	10/16/12 15:20	10
Fluorene	2500		43	9.0	ng/L		09/25/12 18:36	10/16/12 15:20	10
Naphthalene	1600	*	91	12	ng/L		09/25/12 18:36	10/16/12 15:20	10
Phenanthrene	1300		66	34	ng/L		09/25/12 18:36	10/16/12 15:20	10
Pyrene	1700		44	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Biphenyl	520		59	11	ng/L		09/25/12 18:36	10/16/12 15:20	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	90	D	23 - 84	09/25/12 18:36	10/16/12 15:20	10
Chrysene-d12 (Surr)	59	D	28 - 101	09/25/12 18:36	10/16/12 15:20	10
Naphthalene-d8 (Surr)	81	D	22 - 97	09/25/12 18:36	10/16/12 15:20	10

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	3100		120	11	ng/L		09/25/12 18:36	10/16/12 15:59	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	D	23 - 84	09/25/12 18:36	10/16/12 15:59	20
Chrysene-d12 (Surr)	49	D	28 - 101	09/25/12 18:36	10/16/12 15:59	20
Naphthalene-d8 (Surr)	77	D	22 - 97	09/25/12 18:36	10/16/12 15:59	20

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7

Lab Sample ID: 280-33493-9

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.69	ng/L		09/25/12 18:36	10/15/12 16:46	1
2,3-Dihydroindene	3.8	J	5.1	0.71	ng/L		09/25/12 18:36	10/15/12 16:46	1
1-Methylnaphthalene	1.1	J	5.7	0.91	ng/L		09/25/12 18:36	10/15/12 16:46	1
2-Methylnaphthalene	ND		6.0	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acenaphthene	8.6		5.8	0.51	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acenaphthylene	ND		4.9	0.78	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acridine	ND	*	6.6	6.6	ng/L		09/25/12 18:36	10/15/12 16:46	1
Anthracene	1.7	J	4.3	0.81	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[a]anthracene	1.5	J	4.4	0.94	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[a]pyrene	1.4	J	2.5	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[b]fluoranthene	2.0	J	4.8	1.4	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo(b)thiophene	3.1	J	5.3	0.76	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[k]fluoranthene	2.2	J	4.2	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[g,h,i]perylene	2.7	J B	6.3	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Carbazole	1.1	J	3.9	0.73	ng/L		09/25/12 18:36	10/15/12 16:46	1
Chrysene	1.9	J	5.7	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenz(a,h)anthracene	2.3	J	6.0	1.1	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenzofuran	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenzothiophene	ND		4.2	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Fluoranthene	2.3	J	4.7	1.7	ng/L		09/25/12 18:36	10/15/12 16:46	1
Fluorene	ND		4.2	0.87	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indene	6.1	*	4.8	3.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indole	ND		4.8	1.8	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indeno[1,2,3-cd]pyrene	2.8	J B	5.5	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Naphthalene	4.1	J *	8.8	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Perylene	ND		3.9	3.9	ng/L		09/25/12 18:36	10/15/12 16:46	1
Phenanthrene	ND		6.4	3.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Pyrene	2.6	J	4.3	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Quinoline	ND		9.2	5.8	ng/L		09/25/12 18:36	10/15/12 16:46	1
Biphenyl	ND		5.7	1.1	ng/L		09/25/12 18:36	10/15/12 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	78		23 - 84	09/25/12 18:36	10/15/12 16:46	1
Chrysene-d12 (Surr)	49		28 - 101	09/25/12 18:36	10/15/12 16:46	1
Naphthalene-d8 (Surr)	80		22 - 97	09/25/12 18:36	10/15/12 16:46	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.74	ng/L		09/25/12 18:36	10/15/12 18:43	1
2,3-Dihydroindene	4.5	J	5.4	0.76	ng/L		09/25/12 18:36	10/15/12 18:43	1
1-Methylnaphthalene	1.5	J	6.1	0.97	ng/L		09/25/12 18:36	10/15/12 18:43	1
2-Methylnaphthalene	1.7	J	6.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acenaphthene	9.6		6.2	0.54	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acenaphthylene	ND		5.2	0.84	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acridine	ND	*	7.1	7.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Anthracene	1.7	J	4.6	0.87	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[a]anthracene	1.0	J	4.7	1.0	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[a]pyrene	1.3	J	2.7	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[e]pyrene	ND		4.7	1.2	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo(b)thiophene	3.5	J	5.6	0.81	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[k]fluoranthene	1.5	J	4.4	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[g,h,i]perylene	2.3	J B	6.7	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Carbazole	1.2	J	4.1	0.78	ng/L		09/25/12 18:36	10/15/12 18:43	1
Chrysene	ND		6.1	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenz(a,h)anthracene	1.5	J	6.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenzofuran	ND		6.2	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenzothiophene	ND		4.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Fluoranthene	1.8	J	5.0	1.8	ng/L		09/25/12 18:36	10/15/12 18:43	1
Fluorene	ND		4.4	0.92	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indene	6.5	*	5.1	3.6	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indole	ND		5.1	1.9	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indeno[1,2,3-cd]pyrene	2.1	J B	5.9	1.4	ng/L		09/25/12 18:36	10/15/12 18:43	1
Naphthalene	6.8	J *	9.3	1.2	ng/L		09/25/12 18:36	10/15/12 18:43	1
Perylene	ND		4.1	4.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Phenanthrene	ND		6.8	3.5	ng/L		09/25/12 18:36	10/15/12 18:43	1
Pyrene	2.4	J	4.6	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Quinoline	ND		9.8	6.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Biphenyl	ND		6.1	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	88	X	23 - 84	09/25/12 18:36	10/15/12 18:43	1
Chrysene-d12 (Surr)	60		28 - 101	09/25/12 18:36	10/15/12 18:43	1
Naphthalene-d8 (Surr)	89		22 - 97	09/25/12 18:36	10/15/12 18:43	1

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7FB

Lab Sample ID: 280-33493-11

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.9	0.87	ng/L		09/25/12 18:36	10/15/12 19:22	1
2,3-Dihydroindene	ND		6.4	0.89	ng/L		09/25/12 18:36	10/15/12 19:22	1
1-Methylnaphthalene	ND		7.2	1.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
2-Methylnaphthalene	ND		7.5	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acenaphthene	ND		7.3	0.64	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acenaphthylene	ND		6.1	0.98	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acridine	ND	*	8.3	8.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Anthracene	ND		5.4	1.0	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[a]anthracene	ND		5.5	1.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[a]pyrene	ND		3.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[e]pyrene	ND		5.5	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[b]fluoranthene	ND		6.0	1.8	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo(b)thiophene	ND		6.6	0.96	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[k]fluoranthene	ND		5.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[g,h,i]perylene	2.2	J B	7.9	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Carbazole	ND		4.9	0.92	ng/L		09/25/12 18:36	10/15/12 19:22	1
Chrysene	ND		7.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenz(a,h)anthracene	ND		7.5	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenzofuran	ND		7.3	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenzothiophene	ND		5.2	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Fluoranthene	ND		5.9	2.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Fluorene	ND		5.2	1.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indene	ND	*	6.0	4.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indole	ND		6.0	2.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indeno[1,2,3-cd]pyrene	1.9	J B	6.9	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Naphthalene	2.7	J *	11	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Perylene	ND		4.9	4.9	ng/L		09/25/12 18:36	10/15/12 19:22	1
Phenanthrene	ND		8.0	4.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
Pyrene	ND		5.4	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Quinoline	ND		11	7.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Biphenyl	ND		7.2	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	73		23 - 84	09/25/12 18:36	10/15/12 19:22	1
Chrysene-d12 (Surr)	105	X	28 - 101	09/25/12 18:36	10/15/12 19:22	1
Naphthalene-d8 (Surr)	77		22 - 97	09/25/12 18:36	10/15/12 19:22	1

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (28-101)	Naphthalene-d8 (22-97)
280-33493-1	0987-09 W105	82	50	85
280-33493-2	0987-09 E13	82	51	85
280-33493-3	0987-09 SLP6	92 X	69	89
280-33493-4	0987-09 SLP10T	86 X	61	89
280-33493-5	0987-09 W48	81	25 X	82
280-33493-6	0987-09 W119	85 X	28	85
280-33493-7	0987-09 SLP4	87 X	69	84
280-33493-8	0987-09 W23	88 X	57	77
280-33493-8 - DL	0987-09 W23	90 D	59 D	81 D
280-33493-8 - DL2	0987-09 W23	87 D	49 D	77 D
280-33493-9	0987-09 E7	78	49	80
280-33493-9 MS	0987-09 E7	88 X	51	89
280-33493-9 MSD	0987-09 E7	87 X	72	86
280-33493-10	0987-09 E7D	88 X	60	89
280-33493-11	0987-09 E7FB	73	105 X	77
LCS 280-138557/2-A	Lab Control Sample	83	97	85
LCS 280-139011/2-A	Lab Control Sample	86 X	105 X	95
LCSD 280-138557/3-A	Lab Control Sample Dup	86 X	103 X	89
MB 280-138557/1-A	Method Blank	87 X	104 X	92
MB 280-139011/1-A	Method Blank	89 X	108 X	99 X

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-138557/1-A

Matrix: Water

Analysis Batch: 141615

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 138557

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 19:21	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 19:21	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		09/22/12 12:15	10/11/12 19:21	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acenaphthene	ND		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acenaphthylene	ND		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acridine	ND		6.5	6.5	ng/L		09/22/12 12:15	10/11/12 19:21	1
Anthracene	ND		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[g,h,i]perylene	1.25	J	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Carbazole	ND		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 19:21	1
Chrysene	ND		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenzofuran	ND		5.7	0.99	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenzothiophene	ND		4.1	0.98	ng/L		09/22/12 12:15	10/11/12 19:21	1
Fluoranthene	ND		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Fluorene	ND		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indene	ND		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		09/22/12 12:15	10/11/12 19:21	1
Naphthalene	1.19	J	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 19:21	1
Phenanthrene	ND		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Pyrene	ND		4.2	0.99	ng/L		09/22/12 12:15	10/11/12 19:21	1
Quinoline	ND		9.0	5.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Biphenyl	ND		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	87	X	23 - 84	09/22/12 12:15	10/11/12 19:21	1
Chrysene-d12 (Surr)	104	X	28 - 101	09/22/12 12:15	10/11/12 19:21	1
Naphthalene-d8 (Surr)	92		22 - 97	09/22/12 12:15	10/11/12 19:21	1

Lab Sample ID: LCS 280-138557/2-A

Matrix: Water

Analysis Batch: 141615

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	62.9		ng/L		84	30 - 150
2,3-Dihydroindene	75.0	60.1		ng/L		80	30 - 150
1-Methylnaphthalene	75.0	63.2		ng/L		84	30 - 150
2-Methylnaphthalene	75.0	62.8		ng/L		84	25 - 95
3-Methylcholanthrene	75.0	51.9		ng/L		69	30 - 150
Acenaphthene	75.0	63.9		ng/L		85	30 - 150
Acenaphthylene	75.0	57.9		ng/L		77	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-138557/2-A

Matrix: Water

Analysis Batch: 141615

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	50.6		ng/L		67	30 - 150
Anthracene	75.0	62.3		ng/L		83	30 - 150
Benzo[a]anthracene	75.0	71.1		ng/L		95	30 - 150
Benzo[a]pyrene	75.0	60.2		ng/L		80	30 - 150
Benzo[e]pyrene	75.0	67.3		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	65.5		ng/L		87	30 - 150
Benzo(b)thiophene	75.0	64.4		ng/L		86	30 - 150
Benzo[k]fluoranthene	75.0	69.2		ng/L		92	30 - 150
Benzo[g,h,i]perylene	75.0	60.9		ng/L		81	30 - 150
Carbazole	75.0	65.0		ng/L		87	30 - 150
Chrysene	75.0	73.7		ng/L		98	20 - 136
Dibenz(a,h)anthracene	75.0	66.5		ng/L		89	30 - 150
Dibenzofuran	75.0	63.7		ng/L		85	30 - 150
Dibenzothiophene	75.0	65.7		ng/L		88	30 - 150
Fluoranthene	75.0	67.6		ng/L		90	30 - 150
Fluorene	75.0	64.8		ng/L		86	34 - 96
Indene	75.0	61.2		ng/L		82	22 - 86
Indole	75.0	55.2		ng/L		74	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	60.4		ng/L		81	30 - 150
Naphthalene	75.0	64.1		ng/L		85	27 - 95
Perylene	75.0	59.2		ng/L		79	30 - 150
Phenanthrene	75.0	65.9		ng/L		88	30 - 150
Pyrene	75.0	67.5		ng/L		90	30 - 150
Quinoline	75.0	61.7		ng/L		82	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	29.4		ng/L		39	30 - 150
Biphenyl	75.0	62.7		ng/L		84	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	97		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Lab Sample ID: LCSD 280-138557/3-A

Matrix: Water

Analysis Batch: 141615

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 138557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	75.0	65.9		ng/L		88	30 - 150	5	50
2,3-Dihydroindene	75.0	62.8		ng/L		84	30 - 150	4	50
1-Methylnaphthalene	75.0	68.5		ng/L		91	30 - 150	8	50
2-Methylnaphthalene	75.0	68.3		ng/L		91	25 - 95	8	50
3-Methylcholanthrene	75.0	47.8		ng/L		64	30 - 150	8	50
Acenaphthene	75.0	68.4		ng/L		91	30 - 150	7	50
Acenaphthylene	75.0	65.2		ng/L		87	30 - 150	12	50
Acridine	75.0	9.57	*	ng/L		13	30 - 150	136	50
Anthracene	75.0	67.1		ng/L		89	30 - 150	7	50
Benzo[a]anthracene	75.0	75.4		ng/L		100	30 - 150	6	50
Benzo[a]pyrene	75.0	60.4		ng/L		81	30 - 150	0	50
Benzo[e]pyrene	75.0	69.6		ng/L		93	37 - 105	3	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCSD 280-138557/3-A

Matrix: Water

Analysis Batch: 141615

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 138557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	75.0	68.7		ng/L		92	30 - 150	5	50
Benzo(b)thiophene	75.0	67.5		ng/L		90	30 - 150	5	50
Benzo[k]fluoranthene	75.0	70.4		ng/L		94	30 - 150	2	50
Benzo[g,h,i]perylene	75.0	60.2		ng/L		80	30 - 150	1	50
Carbazole	75.0	70.2		ng/L		94	30 - 150	8	50
Chrysene	75.0	77.9		ng/L		104	20 - 136	6	50
Dibenz(a,h)anthracene	75.0	62.9		ng/L		84	30 - 150	5	50
Dibenzofuran	75.0	68.1		ng/L		91	30 - 150	7	50
Dibenzothiophene	75.0	70.5		ng/L		94	30 - 150	7	50
Fluoranthene	75.0	72.2		ng/L		96	30 - 150	7	50
Fluorene	75.0	69.1		ng/L		92	34 - 96	6	50
Indene	75.0	64.0		ng/L		85	22 - 86	5	50
Indole	75.0	57.9		ng/L		77	30 - 150	5	50
Indeno[1,2,3-cd]pyrene	75.0	58.4		ng/L		78	30 - 150	3	50
Naphthalene	75.0	69.9		ng/L		93	27 - 95	9	50
Perylene	75.0	50.9		ng/L		68	30 - 150	15	50
Phenanthrene	75.0	70.7		ng/L		94	30 - 150	7	50
Pyrene	75.0	71.7		ng/L		96	30 - 150	6	50
Quinoline	75.0	45.1		ng/L		60	20 - 112	31	50
7,12-Dimethylbenz(a)anthracene	75.0	33.8		ng/L		45	30 - 150	14	50
Biphenyl	75.0	66.9		ng/L		89	30 - 150	7	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	103	X	28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

Lab Sample ID: MB 280-139011/1-A

Matrix: Water

Analysis Batch: 142187

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 139011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/25/12 18:36	10/15/12 13:29	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		09/25/12 18:36	10/15/12 13:29	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		09/25/12 18:36	10/15/12 13:29	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acenaphthene	ND		5.7	0.50	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acenaphthylene	ND		4.8	0.77	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acridine	ND		6.5	6.5	ng/L		09/25/12 18:36	10/15/12 13:29	1
Anthracene	ND		4.2	0.80	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[g,h,i]perylene	2.04	J	6.2	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Carbazole	ND		3.8	0.72	ng/L		09/25/12 18:36	10/15/12 13:29	1
Chrysene	ND		5.6	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-139011/1-A

Matrix: Water

Analysis Batch: 142187

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 139011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/25/12 18:36	10/15/12 13:29	1
Dibenzofuran	ND		5.7	0.99	ng/L		09/25/12 18:36	10/15/12 13:29	1
Dibenzothiophene	ND		4.1	0.98	ng/L		09/25/12 18:36	10/15/12 13:29	1
Fluoranthene	ND		4.6	1.7	ng/L		09/25/12 18:36	10/15/12 13:29	1
Fluorene	ND		4.1	0.85	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indene	ND		4.7	3.3	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indole	ND		4.7	1.7	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indeno[1,2,3-cd]pyrene	1.80	J	5.4	1.3	ng/L		09/25/12 18:36	10/15/12 13:29	1
Naphthalene	ND		8.6	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1
Perylene	ND		3.8	3.8	ng/L		09/25/12 18:36	10/15/12 13:29	1
Phenanthrene	ND		6.3	3.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Pyrene	ND		4.2	0.99	ng/L		09/25/12 18:36	10/15/12 13:29	1
Quinoline	ND		9.0	5.7	ng/L		09/25/12 18:36	10/15/12 13:29	1
Biphenyl	ND		5.6	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	89	X	23 - 84	09/25/12 18:36	10/15/12 13:29	1
Chrysene-d12 (Surr)	108	X	28 - 101	09/25/12 18:36	10/15/12 13:29	1
Naphthalene-d8 (Surr)	99	X	22 - 97	09/25/12 18:36	10/15/12 13:29	1

Lab Sample ID: LCS 280-139011/2-A

Matrix: Water

Analysis Batch: 142187

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	70.6		ng/L		94	30 - 150
2,3-Dihydroindene	75.0	68.8		ng/L		92	30 - 150
1-Methylnaphthalene	75.0	70.9		ng/L		94	30 - 150
2-Methylnaphthalene	75.0	71.6		ng/L		95	25 - 95
3-Methylcholanthrene	75.0	62.0		ng/L		83	30 - 150
Acenaphthene	75.0	69.9		ng/L		93	30 - 150
Acenaphthylene	75.0	62.2		ng/L		83	30 - 150
Acridine	75.0	15.2	*	ng/L		20	30 - 150
Anthracene	75.0	68.8		ng/L		92	30 - 150
Benzo[a]anthracene	75.0	81.2		ng/L		108	30 - 150
Benzo[a]pyrene	75.0	68.5		ng/L		91	30 - 150
Benzo[e]pyrene	75.0	75.1		ng/L		100	37 - 105
Benzo[b]fluoranthene	75.0	70.3		ng/L		94	30 - 150
Benzo(b)thiophene	75.0	70.9		ng/L		95	30 - 150
Benzo[k]fluoranthene	75.0	80.2		ng/L		107	30 - 150
Benzo[g,h,i]perylene	75.0	67.8		ng/L		90	30 - 150
Carbazole	75.0	73.1		ng/L		98	30 - 150
Chrysene	75.0	80.3		ng/L		107	20 - 136
Dibenz(a,h)anthracene	75.0	73.3		ng/L		98	30 - 150
Dibenzofuran	75.0	70.9		ng/L		95	30 - 150
Dibenzothiophene	75.0	73.9		ng/L		98	30 - 150
Fluoranthene	75.0	80.3		ng/L		107	30 - 150
Fluorene	75.0	70.8		ng/L		94	34 - 96
Indene	75.0	68.3	*	ng/L		91	22 - 86

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-139011/2-A

Matrix: Water

Analysis Batch: 142187

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Indole	75.0	65.6		ng/L		87	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	66.8		ng/L		89	30 - 150
Naphthalene	75.0	76.0	*	ng/L		101	27 - 95
Perylene	75.0	68.1		ng/L		91	30 - 150
Phenanthrene	75.0	76.9		ng/L		103	30 - 150
Pyrene	75.0	80.0		ng/L		107	30 - 150
Quinoline	75.0	42.9		ng/L		57	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	19.2	*	ng/L		26	30 - 150
Biphenyl	75.0	70.2		ng/L		94	30 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	105	X	28 - 101
Naphthalene-d8 (Surr)	95		22 - 97

Lab Sample ID: 280-33493-9 MS

Matrix: Water

Analysis Batch: 142187

Client Sample ID: 0987-09 E7

Prep Type: Total/NA

Prep Batch: 139011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		81.8	72.7		ng/L		89	30 - 150
2,3-Dihydroindene	3.8	J	81.8	72.6		ng/L		84	30 - 150
1-Methylnaphthalene	1.1	J	81.8	74.8		ng/L		90	30 - 150
2-Methylnaphthalene	ND		81.8	75.0		ng/L		92	25 - 95
3-Methylcholanthrene	ND		81.8	8.78	F	ng/L		11	30 - 150
Acenaphthene	8.6		81.8	83.3		ng/L		91	30 - 150
Acenaphthylene	ND		81.8	73.7		ng/L		90	30 - 150
Acridine	ND	*	81.8	63.7		ng/L		78	30 - 150
Anthracene	1.7	J	81.8	82.8		ng/L		99	30 - 150
Benzo[a]anthracene	1.5	J	81.8	41.9		ng/L		49	30 - 150
Benzo[a]pyrene	1.4	J	81.8	9.04	F	ng/L		9	30 - 150
Benzo[e]pyrene	ND		81.8	8.64	F	ng/L		11	37 - 105
Benzo[b]fluoranthene	2.0	J	81.8	10.8	F	ng/L		11	30 - 150
Benzo(b)thiophene	3.1	J	81.8	73.8		ng/L		86	30 - 150
Benzo[k]fluoranthene	2.2	J	81.8	10.1	F	ng/L		10	30 - 150
Benzo[g,h,i]perylene	2.7	J B	81.8	4.24	J F	ng/L		2	30 - 150
Carbazole	1.1	J	81.8	87.0		ng/L		105	30 - 150
Chrysene	1.9	J	81.8	42.2		ng/L		49	20 - 136
Dibenz(a,h)anthracene	2.3	J	81.8	3.53	J F	ng/L		1	30 - 150
Dibenzofuran	ND		81.8	74.9		ng/L		92	30 - 150
Dibenzothiophene	ND		81.8	80.2		ng/L		98	30 - 150
Fluoranthene	2.3	J	81.8	84.5		ng/L		101	30 - 150
Fluorene	ND		81.8	74.5		ng/L		91	34 - 96
Indene	6.1	*	81.8	76.8	F	ng/L		87	22 - 86
Indole	ND		81.8	71.2		ng/L		87	30 - 150
Indeno[1,2,3-cd]pyrene	2.8	J B	81.8	4.38	J F	ng/L		2	30 - 150
Naphthalene	4.1	J *	81.8	80.9		ng/L		94	27 - 95
Perylene	ND		81.8	9.25	F	ng/L		11	30 - 150
Phenanthrene	ND		81.8	80.6		ng/L		98	30 - 150

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-33493-9 MS

Matrix: Water

Analysis Batch: 142187

Client Sample ID: 0987-09 E7

Prep Type: Total/NA

Prep Batch: 139011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	2.6	J	81.8	84.3		ng/L		100	30 - 150
Quinoline	ND		81.8	72.9		ng/L		89	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		81.8	72.3		ng/L		88	30 - 150
Biphenyl	ND		81.8	72.1		ng/L		88	30 - 150
Surrogate	MS %Recovery	MS Qualifier	Limits						
Fluorene-d10 (Surr)	88	X	23 - 84						
Chrysene-d12 (Surr)	51		28 - 101						
Naphthalene-d8 (Surr)	89		22 - 97						

Lab Sample ID: 280-33493-9 MSD

Matrix: Water

Analysis Batch: 142187

Client Sample ID: 0987-09 E7

Prep Type: Total/NA

Prep Batch: 139011

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	ND		79.2	66.7		ng/L		84	30 - 150	9	50
2,3-Dihydroindene	3.8	J	79.2	66.5		ng/L		79	30 - 150	9	50
1-Methylnaphthalene	1.1	J	79.2	68.6		ng/L		85	30 - 150	9	50
2-Methylnaphthalene	ND		79.2	68.5		ng/L		86	25 - 95	9	50
3-Methylcholanthrene	ND		79.2	9.77	F	ng/L		12	30 - 150	11	50
Acenaphthene	8.6		79.2	80.1		ng/L		90	30 - 150	4	50
Acenaphthylene	ND		79.2	69.8		ng/L		88	30 - 150	5	50
Acridine	ND	*	79.2	67.5		ng/L		85	30 - 150	6	50
Anthracene	1.7	J	79.2	76.9		ng/L		95	30 - 150	7	50
Benzo[a]anthracene	1.5	J	79.2	57.2		ng/L		70	30 - 150	31	50
Benzo[a]pyrene	1.4	J	79.2	10.7	F	ng/L		12	30 - 150	17	50
Benzo[e]pyrene	ND		79.2	11.2	F	ng/L		14	37 - 105	26	50
Benzo[b]fluoranthene	2.0	J	79.2	13.1	F	ng/L		14	30 - 150	19	50
Benzo(b)thiophene	3.1	J	79.2	70.2		ng/L		85	30 - 150	5	50
Benzo[k]fluoranthene	2.2	J	79.2	12.3	F	ng/L		13	30 - 150	19	50
Benzo[g,h,i]perylene	2.7	J B	79.2	3.67	J F	ng/L		1	30 - 150	15	50
Carbazole	1.1	J	79.2	81.1		ng/L		101	30 - 150	7	50
Chrysene	1.9	J	79.2	56.9		ng/L		69	20 - 136	30	50
Dibenz(a,h)anthracene	2.3	J	79.2	2.90	J F	ng/L		0.7	30 - 150	20	50
Dibenzofuran	ND		79.2	71.0		ng/L		90	30 - 150	5	50
Dibenzothiophene	ND		79.2	74.4		ng/L		94	30 - 150	8	50
Fluoranthene	2.3	J	79.2	80.9		ng/L		99	30 - 150	4	50
Fluorene	ND		79.2	71.5		ng/L		90	34 - 96	4	50
Indene	6.1	*	79.2	70.9		ng/L		82	22 - 86	8	50
Indole	ND		79.2	68.9		ng/L		87	30 - 150	3	50
Indeno[1,2,3-cd]pyrene	2.8	J B	79.2	3.78	J F	ng/L		1	30 - 150	15	50
Naphthalene	4.1	J *	79.2	71.9		ng/L		86	27 - 95	12	50
Perylene	ND		79.2	11.9	F	ng/L		15	30 - 150	25	50
Phenanthrene	ND		79.2	75.0		ng/L		95	30 - 150	7	50
Pyrene	2.6	J	79.2	80.7		ng/L		99	30 - 150	4	50
Quinoline	ND		79.2	72.2		ng/L		91	20 - 112	1	50
7,12-Dimethylbenz(a)anthracene	ND		79.2	73.8		ng/L		93	30 - 150	2	50
Biphenyl	ND		79.2	68.1		ng/L		86	30 - 150	6	50

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-33493-9 MSD

Matrix: Water

Analysis Batch: 142187

Client Sample ID: 0987-09 E7

Prep Type: Total/NA

Prep Batch: 139011

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	72		28 - 101
Naphthalene-d8 (Surr)	86		22 - 97

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

GC/MS Semi VOA

Prep Batch: 138557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-1	0987-09 W105	Total/NA	Water	3520C	
280-33493-2	0987-09 E13	Total/NA	Water	3520C	
280-33493-3	0987-09 SLP6	Total/NA	Water	3520C	
280-33493-4	0987-09 SLP10T	Total/NA	Water	3520C	
280-33493-5	0987-09 W48	Total/NA	Water	3520C	
LCS 280-138557/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-138557/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 280-138557/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 139011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-6	0987-09 W119	Total/NA	Water	3520C	
280-33493-7	0987-09 SLP4	Total/NA	Water	3520C	
280-33493-8	0987-09 W23	Total/NA	Water	3520C	
280-33493-8 - DL	0987-09 W23	Total/NA	Water	3520C	
280-33493-8 - DL2	0987-09 W23	Total/NA	Water	3520C	
280-33493-9	0987-09 E7	Total/NA	Water	3520C	
280-33493-9 MS	0987-09 E7	Total/NA	Water	3520C	
280-33493-9 MSD	0987-09 E7	Total/NA	Water	3520C	
280-33493-10	0987-09 E7D	Total/NA	Water	3520C	
280-33493-11	0987-09 E7FB	Total/NA	Water	3520C	
LCS 280-139011/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-139011/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 141615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-1	0987-09 W105	Total/NA	Water	8270C SIM	138557
280-33493-2	0987-09 E13	Total/NA	Water	8270C SIM	138557
280-33493-3	0987-09 SLP6	Total/NA	Water	8270C SIM	138557
280-33493-4	0987-09 SLP10T	Total/NA	Water	8270C SIM	138557
280-33493-5	0987-09 W48	Total/NA	Water	8270C SIM	138557
LCS 280-138557/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	138557
LCSD 280-138557/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	138557
MB 280-138557/1-A	Method Blank	Total/NA	Water	8270C SIM	138557

Analysis Batch: 142187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-6	0987-09 W119	Total/NA	Water	8270C SIM	139011
280-33493-7	0987-09 SLP4	Total/NA	Water	8270C SIM	139011
280-33493-8	0987-09 W23	Total/NA	Water	8270C SIM	139011
280-33493-9	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-9 MS	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-9 MSD	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-10	0987-09 E7D	Total/NA	Water	8270C SIM	139011
280-33493-11	0987-09 E7FB	Total/NA	Water	8270C SIM	139011
LCS 280-139011/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	139011
MB 280-139011/1-A	Method Blank	Total/NA	Water	8270C SIM	139011

Analysis Batch: 142406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-8 - DL	0987-09 W23	Total/NA	Water	8270C SIM	139011
280-33493-8 - DL2	0987-09 W23	Total/NA	Water	8270C SIM	139011

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W105

Date Collected: 09/19/12 08:40

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3996.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 22:31	KGV	TAL DEN

Client Sample ID: 0987-09 E13

Date Collected: 09/19/12 12:09

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3977.2 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 23:10	KGV	TAL DEN

Client Sample ID: 0987-09 SLP6

Date Collected: 09/19/12 13:21

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3828.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 23:48	KGV	TAL DEN

Client Sample ID: 0987-09 SLP10T

Date Collected: 09/19/12 08:13

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			4065.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/12/12 00:27	KGV	TAL DEN

Client Sample ID: 0987-09 W48

Date Collected: 09/19/12 10:50

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3719.7 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/12/12 01:06	KGV	TAL DEN

Client Sample ID: 0987-09 W119

Date Collected: 09/19/12 10:10

Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3900.2 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 14:48	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP4

Lab Sample ID: 280-33493-7

Date Collected: 09/19/12 09:28

Matrix: Water

Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			4083.4 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 15:27	KGV	TAL DEN

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Date Collected: 09/19/12 08:50

Matrix: Water

Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 16:07	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM	DL	10			142406	10/16/12 15:20	KGV	TAL DEN
Total/NA	Prep	3520C	DL2		3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM	DL2	20			142406	10/16/12 15:59	KGV	TAL DEN

Client Sample ID: 0987-09 E7

Lab Sample ID: 280-33493-9

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3926.6 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 16:46	KGV	TAL DEN

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3687.5 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 18:43	KGV	TAL DEN

Client Sample ID: 0987-09 E7FB

Lab Sample ID: 280-33493-11

Date Collected: 09/19/12 12:35

Matrix: Water

Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3131.2 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 19:22	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-30-13
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-13
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-13
Tennessee	State Program	4	TN02944	09-30-13
Texas	NELAC	6	T104704183-08-TX	09-30-13
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-13
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-13
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-13
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

TAL-4124-280 (05/08)

Client	Summit Environments LLC	Project Manager	Bill Gregg	Date	9/19/12	Chain of Custody Number	156469
Address	1217 Bandana Blvd N.	Telephone Number (Area Code)/Fax Number	(651) 262-4236	Lab Number		Page	1 of 2
City	SL Paul	State	MN	Zip Code	55108	Analysis (Attach list if more space is needed)	

Project Name and Location (State)	SLP/Reilly Site	Carrier/Waybill Number	
Contract/Purchase Order/Quote No.		Lab Contact	

Contract/Purchase Order/Quote No.			Containers & Preservatives										Matrix										Sample I.D. No. and Description (Containers for each sample may be combined on one line)										Date										Time										Air										Aqueous										Sed.										Soil										Unpres.										H2SO4										HNO3										HCl										NaOH										ZnAc/NaOH										PAH										Conditions of Receipt																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	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Possible Hazard Identification	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months
Turn Around Time Required	<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	<input type="checkbox"/> Other	(A fee may be assessed if samples are retained longer than 1 month)		

1. Relinquished By	Rebecca Edlin	Date	9/19/12	Time	14:30	1. Received By		Date	9/19/12	Time	9:30
2. Relinquished By		Date		Time		2. Received By		Date		Time	
3. Relinquished By		Date		Time		3. Received By		Date		Time	

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Summit Environments LLC	Bill Grogg	9/19/12	156470
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page <u>2</u> of <u>2</u>
	(1051) 262-4236		

City	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if
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Project Name and Location (State)	Carrier/Waybill Number

[illegible]

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time
	Air	Approximate Time
	Sed.	
	Inpres.	
	H ₂ SO ₄	
	HNO ₃	
	HCl	
	NaOH	
	ZnAcI	
	NaOH	
	PA	

[illegible][illegible][illegible]

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																												
Population (millions)	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	35.0	35.1

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Sample ID	Sample Description	Sample Location	Sample Date	Sample Time	Sample Type	Sample Status	Sample Analysis	Sample Results	Sample Disposal
1	Sample 1	Sample 1 Location	Sample 1 Date	Sample 1 Time	Sample 1 Type	Sample 1 Status	Sample 1 Analysis	Sample 1 Results	Sample 1 Disposal
2	Sample 2	Sample 2 Location	Sample 2 Date	Sample 2 Time	Sample 2 Type	Sample 2 Status	Sample 2 Analysis	Sample 2 Results	Sample 2 Disposal
3	Sample 3	Sample 3 Location	Sample 3 Date	Sample 3 Time	Sample 3 Type	Sample 3 Status	Sample 3 Analysis	Sample 3 Results	Sample 3 Disposal
4	Sample 4	Sample 4 Location	Sample 4 Date	Sample 4 Time	Sample 4 Type	Sample 4 Status	Sample 4 Analysis	Sample 4 Results	Sample 4 Disposal
5	Sample 5	Sample 5 Location	Sample 5 Date	Sample 5 Time	Sample 5 Type	Sample 5 Status	Sample 5 Analysis	Sample 5 Results	Sample 5 Disposal
6	Sample 6	Sample 6 Location	Sample 6 Date	Sample 6 Time	Sample 6 Type	Sample 6 Status	Sample 6 Analysis	Sample 6 Results	Sample 6 Disposal
7	Sample 7	Sample 7 Location	Sample 7 Date	Sample 7 Time	Sample 7 Type	Sample 7 Status	Sample 7 Analysis	Sample 7 Results	Sample 7 Disposal
8	Sample 8	Sample 8 Location	Sample 8 Date	Sample 8 Time	Sample 8 Type	Sample 8 Status	Sample 8 Analysis	Sample 8 Results	Sample 8 Disposal
9	Sample 9	Sample 9 Location	Sample 9 Date	Sample 9 Time	Sample 9 Type	Sample 9 Status	Sample 9 Analysis	Sample 9 Results	Sample 9 Disposal
10	Sample 10	Sample 10 Location	Sample 10 Date	Sample 10 Time	Sample 10 Type	Sample 10 Status	Sample 10 Analysis	Sample 10 Results	Sample 10 Disposal
11	Sample 11	Sample 11 Location	Sample 11 Date	Sample 11 Time	Sample 11 Type	Sample 11 Status	Sample 11 Analysis	Sample 11 Results	Sample 11 Disposal
12	Sample 12	Sample 12 Location	Sample 12 Date	Sample 12 Time	Sample 12 Type	Sample 12 Status	Sample 12 Analysis	Sample 12 Results	Sample 12 Disposal
13	Sample 13	Sample 13 Location	Sample 13 Date	Sample 13 Time	Sample 13 Type	Sample 13 Status	Sample 13 Analysis	Sample 13 Results	Sample 13 Disposal
14	Sample 14	Sample 14 Location	Sample 14 Date	Sample 14 Time	Sample 14 Type	Sample 14 Status	Sample 14 Analysis	Sample 14 Results	Sample 14 Disposal
15	Sample 15	Sample 15 Location	Sample 15 Date	Sample 15 Time	Sample 15 Type	Sample 15 Status	Sample 15 Analysis	Sample 15 Results	Sample 15 Disposal
16	Sample 16	Sample 16 Location	Sample 16 Date	Sample 16 Time	Sample 16 Type	Sample 16 Status	Sample 16 Analysis	Sample 16 Results	Sample 16 Disposal
17	Sample 17	Sample 17 Location	Sample 17 Date	Sample 17 Time	Sample 17 Type	Sample 17 Status	Sample 17 Analysis	Sample 17 Results	Sample 17 Disposal
18	Sample 18	Sample 18 Location	Sample 18 Date	Sample 18 Time	Sample 18 Type	Sample 18 Status	Sample 18 Analysis	Sample 18 Results	Sample 18 Disposal
19	Sample 19	Sample 19 Location	Sample 19 Date	Sample 19 Time	Sample 19 Type	Sample 19 Status	Sample 19 Analysis	Sample 19 Results	Sample 19 Disposal
20	Sample 20	Sample 20 Location	Sample 20 Date	Sample 20 Time	Sample 20 Type	Sample 20 Status	Sample 20 Analysis	Sample 20 Results	Sample 20 Disposal
21	Sample 21	Sample 21 Location	Sample 21 Date	Sample 21 Time	Sample 21 Type	Sample 21 Status	Sample 21 Analysis	Sample 21 Results	Sample 21 Disposal
22	Sample 22	Sample 22 Location	Sample 22 Date	Sample 22 Time	Sample 22 Type	Sample 22 Status	Sample 22 Analysis	Sample 22 Results	Sample 22 Disposal
23	Sample 23	Sample 23 Location	Sample 23 Date	Sample 23 Time	Sample 23 Type	Sample 23 Status	Sample 23 Analysis	Sample 23 Results	Sample 23 Disposal
24	Sample 24	Sample 24 Location	Sample 24 Date	Sample 24 Time	Sample 24 Type	Sample 24 Status	Sample 24 Analysis	Sample 24 Results	Sample 24 Disposal
25	Sample 25	Sample 25 Location	Sample 25 Date	Sample 25 Time	Sample 25 Type	Sample 25 Status	Sample 25 Analysis	Sample 25 Results	Sample 25 Disposal
26	Sample 26	Sample 26 Location	Sample 26 Date	Sample 26 Time	Sample 26 Type	Sample 26 Status	Sample 26 Analysis	Sample 26 Results	Sample 26 Disposal
27	Sample 27	Sample 27 Location	Sample 27 Date	Sample 27 Time	Sample 27 Type	Sample 27 Status	Sample 27 Analysis	Sample 27 Results	Sample 27 Disposal
28	Sample 28	Sample 28 Location	Sample 28 Date	Sample 28 Time	Sample 28 Type	Sample 28 Status	Sample 28 Analysis	Sample 28 Results	Sample 28 Disposal
29	Sample 29	Sample 29 Location	Sample 29 Date	Sample 29 Time	Sample 29 Type	Sample 29 Status	Sample 29 Analysis	Sample 29 Results	Sample 29 Disposal
30	Sample 30	Sample 30 Location	Sample 30 Date	Sample 30 Time	Sample 30 Type	Sample 30 Status	Sample 30 Analysis	Sample 30 Results	Sample 30 Disposal
31	Sample 31	Sample 31 Location	Sample 31 Date	Sample 31 Time	Sample 31 Type	Sample 31 Status	Sample 31 Analysis	Sample 31 Results	Sample 31 Disposal
32	Sample 32	Sample 32 Location	Sample 32 Date	Sample 32 Time	Sample 32 Type	Sample 32 Status	Sample 32 Analysis	Sample 32 Results	Sample 32 Disposal
33	Sample 33	Sample 33 Location	Sample 33 Date	Sample 33 Time	Sample 33 Type	Sample 33 Status	Sample 33 Analysis	Sample 33 Results	Sample 33 Disposal
34	Sample 34	Sample 34 Location	Sample 34 Date	Sample 34 Time	Sample 34 Type	Sample 34 Status	Sample 34 Analysis	Sample 34 Results	Sample 34 Disposal
35	Sample 35	Sample 35 Location	Sample 35 Date	Sample 35 Time	Sample 35 Type	Sample 35 Status	Sample 35 Analysis	Sample 35 Results	Sample 35 Disposal
36	Sample 36	Sample 36 Location	Sample 36 Date	Sample 36 Time	Sample 36 Type	Sample 36 Status	Sample 36 Analysis	Sample 3	

Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

[illegible]

Relinquished By	Date	Time	1. Received By	Date	Time

Rebecca Enders	9/19/12	1	✓	9/20/12	930
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	Date	Time
Relinquished By	2. Received By	
Date	Date	Time

Relinquished By	3. Received By		Time
	Date	Date	

[illegible]

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

0 1 2 3 4 5

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Login Number: 33493

List Source: TestAmerica Denver

List Number: 1

Creator: Cofoid, Stephen T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-33493-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 28, 2013

Reilly\280-33493-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for 10 aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-33493-1 in a single data package. The following samples were reported:

0987-09 W105	0987-09 E13	0987-09 SLP6
0987-09 SLP10T	0987-09 W48	0987-09 W119
0987-09 SLP4	0987-09 W23	0987-07 E7
0987-09 E7D	0987-09 E7 FB	

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected at the reporting limit.
- Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected at the reporting limit.
- Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]perylene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and 0987-09 E7 FB were qualified as not detected at the reporting limit.
- Results for Acridine in all samples were qualified as estimated (L, UJ).
- Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ).
- Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ).
- Results for Benzo[a]pyrene and, Dibenz[a,h]anthracene in all samples were qualified as rejected (R) for non-detects and estimated low (L,) for detects.

- Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

. This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

- MI = This flag applies when an compound has matrix interferences.
- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of September 19, 2012. The samples were received by the laboratory on September 20, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (0.5°C to 2.6°C ; criteria $4.0^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$). All samples were extracted on September 22 and 25, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on October 11, 12, 15 and 16, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". Summary forms for three perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. The performance checks were acceptable based on the summary form provided. See Section XII. Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on October 11, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained

from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

Two CC standards were analyzed in association with these samples. The relative response factors (RRFs) as well as percent differences (%Ds) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %D values were below the maximum acceptance limit of 35 percent as defined in the QAPP.

IV. Blanks

Two laboratory method blanks and one field blank were analyzed in support of these samples. Benzo[g,h,i]perylene (1.25 ng/L) and Naphthalene (1.19 ng/L) were detected in method blank 280-138557/1-A. Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected (U) at the reporting limit. Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected (U) at the reporting limit. Benzo[g,h,i]perylene (2.04 ng/L) and Indeno[1,2,3-cd]pyrene (1.80 ng/L) were detected in method blank 280-139011/1-A. Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]pyrene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and 0987-09 E7 FB were qualified as not detected (U) at the reporting limit.

Naphthalene (2.7 ng/L) was detected in the field blank. Following qualification based on method blank, results for Naphthalene in 0987-09 SLP6, 0987-09 W48, 0987-09 W119, 0987-09 SLP4, 0987-07 E7 and 0987-09 E7D were qualified as not detected (U) at the reporting limit.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated and accurately reported. Percent recoveries were acceptable except as detailed below:

Sample	Fluorene-d10 %Recovery Limits (23-84%)	Chrysene-d12 % Recovery Limits (28-101%)
MB 280 138557/1-A	87	104
MB 280 139077/1-A	89	108
LCS 280 139011/2-A	86	105
LCSD	86	103
280 33493-9 MS	88	
280 33493-9 MSD	87	
0987-09 SLP6	92	
0987-09 SLP10T	86	
0987-09 W119	85	
0987-09 SLP4	87	
0987-09 W23	88	
0987-09 E7D	88	

The recoveries of Fluorene-d10, even though they are outside laboratory QC limits, are acceptable; therefore, based on professional judgment, no qualification of data were made based on the exceedances.

The recovery of Chrysene-d12 was low, outside acceptance limits (28-101%) in 0987-09 W48 (25%R) and 0987-09 W119 (28%R). Results for Benzo [a] anthracene, Chrysene, Benzo [b] fluoranthene, Benzo [k] fluoranthene, Benzo [e] pyrene, Benzo [a] pyrene, Perylene, Indeno [1,2,3-cd] pyrene, Dibenz (a,h) anthracene, and Benzo [g,h,i] perylene in 0987-09 W48 and 0987-09 W119 were not qualified because they were subsequently qualified based on MS/MSD recoveries.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample 0987-09 E7. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo[a]pyrene	9	12		30-150 (25)	L/R
Benzo[e]pyrene	11	14	26	37-105 (25)	L/UJ
Benzo[b]fluoranthene	11	14		30-150 (25)	L/UJ
Benzo[k]fluoranthene	10	13		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	2	1		30-150 (25)	L/R
Dibenz[a,h]anthracene	1	0.7		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	2	1		30-150 (25)	L/R
Perylene	11	15		30-150 (25)	L/UJ
Benzo[a]anthracene			31	30-150 (25)	L/UJ
Chrysene			30	30-150 (25)	L/UJ

*based on amount recovered.

Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ) due to unacceptable MS/MSD recoveries. Results may be biased low. Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ) due to the high RPD. Results for Benzo[a]pyrene and Dibenz[a,h]anthracene were qualified as rejected (R) for non-detects in all field samples were qualified as estimated (L,) due to unacceptable MS/MSD recoveries.

B. Laboratory Control Sample (LCS)

Results for one LCS and one LCS/LCSD were provided in the data package. All recoveries were acceptable with the exception of Acridine (20%R) in LCS 280-139011/2-A. Results for Acridine in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-09 E7 and 0987-09 E7D were qualified as estimated (L, UJ) due to an unacceptable LCS recovery.

Results for 0987-09 W105, 0987-09 E13, 0987-09 SLP6, 0987-09 SLP10T and 0987-09 W48 were qualified as estimated (L, UJ) for Acridine due to unacceptable recovery of Acridine (13%) in LCSD 280 138557/3-A and the RPD (136%) between the LCS and LCSD %R for Acridine.

VII. Field Duplicate

Sample 0987-09 E7D was collected as a field duplicate of sample 0987-09 E7. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for paired samples. 2-Methylnaphthalene was detected in 0987-09 E7D but not in 0987-09 E7, and Benzo[b]fluoranthene was detected in 0987-09 E7 but not in 0987-09 E7D. Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limit for pyrene. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of Acridine and Perylene with the project RL goal at 6.5 and 3.8ng/L and the MDL at 6.7 and 3.9 ng/L respectively.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- Response factors (RF) for the 10 ng/L and 20 ng/L standards in the IC could not be reproduced. This did not affect the final sample results.
- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument.
- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected at the reporting limit due to method blank contamination.
- Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected at the reporting limit due to method blank contamination.
- Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]perylene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and

0987-09 E7 FB were qualified as not detected at the reporting limit due to method blank contamination.

- Results for Acridine in all samples were qualified as estimated (L, UJ) due to unacceptable LCS recovery and unacceptable LCS/LCSD RPD.
- Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ) due to unacceptable MS/MSD recovery.
- Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ) due to the high MS/MSD RPD.
- Results for Benzo[a]pyrene, Dibenz[a,h]anthracene in all samples were qualified as rejected (R) for non-detects and estimated low (L,) for detects due to unacceptable MS/MSD recoveries.
- Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL due to imprecision in field duplicate samples.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semi volatiles data.

APPENDIX A

PAHs in Water

Data Summary Forms

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W105

Lab Sample ID: 280-33493-1

Date Sampled: 09/19/2012 0840

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7907.D
Dilution:	1.0			Initial Weight/Volume:	3996.1 mL
Analysis Date:	10/11/2012 2231			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	53		0.70	5.0
1-Methylnaphthalene	32		0.89	5.6
2-Methylnaphthalene	16		0.98	5.9
Acenaphthene	110		0.50	5.7
Acenaphthylene	10		0.77	4.8
Acridine	ND <i>uJ</i>	<i>1</i>	6.5	6.5
Anthracene	15		0.80	4.2
Benzo[a]anthracene	18 <i>J</i>		0.92	4.3
Benzo[a]pyrene	1.6 <i>L</i>	<i>J</i>	1.2	2.5
Benzo[e]pyrene	1.1 <i>L</i>	<i>J</i>	1.1	4.3
Benzo[b]fluoranthene	1.9 <i>L</i>	<i>J</i>	1.4	4.7
Benzo(b)thiophene	12		0.75	5.2
Benzo[k]fluoranthene	ND <i>uJ</i>		1.2	4.1
Benzo[g,h,i]perylene	1.3 <i>uJ</i>	<i>JB</i>	1.2	6.2
Carbazole	9.3		0.72	3.8
Chrysene	11 <i>J</i>		1.2	5.6
Dibenz(a,h)anthracene	ND <i>R</i>		1.0	5.9
Dibenzofuran	30		0.99	5.7
Dibenzothiophene	11		0.98	4.1
Fluoranthene	240		1.7	4.6
Fluorene	73		0.85	4.1
Indene	5.3		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	1.3 <i>L</i>	<i>J</i>	1.3	5.4
Naphthalene	35 <i>L</i>	<i>B</i>	1.1	8.6
Perylene	ND <i>uJ</i>		3.8	3.8
Phenanthrene	67		3.2	6.3
Pyrene	200		0.99	4.2
Quinoline	ND		5.7	9.0
Biphenyl	24		1.1	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 E13

Lab Sample ID: 280-33493-2

Date Sampled: 09/19/2012 1209

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7908.D
Dilution:	1.0			Initial Weight/Volume:	3977.2 mL
Analysis Date:	10/11/2012 2310			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	6.3		0.70	5.0
1-Methylnaphthalene	ND		0.90	5.6
2-Methylnaphthalene	ND		0.99	5.9
Acenaphthene	120		0.50	5.7
Acenaphthylene	9.4		0.77	4.8
Acridine	ND <i>UJ</i>	<i>✓</i>	6.5	6.5
Anthracene	ND		0.80	4.2
Benzo[a]anthracene	ND <i>UJ</i>		0.93	4.3
Benzo[a]pyrene	ND <i>R</i>		1.2	2.5
Benzo[e]pyrene	ND <i>UJ</i>		1.1	4.3
Benzo[b]fluoranthene	ND <i>UJ</i>		1.4	4.7
Benzo(b)thiophene	ND		0.75	5.2
Benzo[k]fluoranthene	ND <i>UJ</i>		1.2	4.1
Benzo[g,h,i]perylene	14 <i>U</i>	<i>JB</i>	1.2	6.2
Carbazole	ND		0.72	3.8
Chrysene	ND <i>UJ</i>		1.2	5.6
Dibenz(a,h)anthracene	ND <i>R</i>		1.0	5.9
Dibenzofuran	ND		1.0	5.7
Dibenzothiophene	2.8 <i>J</i>	<i>↓</i>	0.99	4.1
Fluoranthene	ND		1.7	4.6
Fluorene	ND		0.85	4.1
Indene	ND		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	1.3 <i>L</i>	<i>↓</i>	1.3	5.4
Naphthalene	22 <i>U</i>	<i>JB</i>	1.1	8.6
Perylene	ND <i>UJ</i>	<i>✓</i>	3.8	3.8
Phenanthrene	ND		3.2	6.3
Pyrene	12		1.0	4.2
Quinoline	ND		5.7	9.1
Biphenyl	ND		1.1	5.6
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	82		23 - 84	
Chrysene-d12 (Surr)	51		28 - 101	
Naphthalene-d8 (Surr)	85		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 SLP6

Lab Sample ID: 280-33493-3

Date Sampled: 09/19/2012 1321

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7909.D
Dilution:	1.0			Initial Weight/Volume:	3828.1 mL
Analysis Date:	10/11/2012 2348			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.90	J	0.71	5.6
2,3-Dihydroindene	59		0.73	5.2
1-Methylnaphthalene	2.3	J	0.93	5.9
2-Methylnaphthalene	1.5	J	1.0	6.2
Acenaphthene	83		0.52	6.0
Acenaphthylene	10		0.80	5.0
Acridine	14 L	J	6.8	6.8
Anthracene	3.3 J	J	0.84	4.4
Benzo[a]anthracene	ND UJ		0.96	4.5
Benzo[a]pyrene	ND R		1.3	2.6
Benzo[e]pyrene	ND UJ		1.2	4.5
Benzo[b]fluoranthene	ND UJ		1.5	4.9
Benzo(b)thiophene	12		0.78	5.4
Benzo[k]fluoranthene	ND UJ		1.3	4.3
Benzo[g,h,i]perylene	1.6 U	JB	1.2	6.5
Carbazole	3.2	J	0.75	4.0
Chrysene	ND UJ		1.3	5.9
Dibenz(a,h)anthracene	ND R		1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	2.4	J	1.0	4.3
Fluoranthene	3.6	J	1.8	4.8
Fluorene	ND		0.89	4.3
Indene	7.5		3.4	4.9
Indole	2.9	J	1.8	4.9
Indeno[1,2,3-cd]pyrene	1.5 L	J	1.3	5.6
Naphthalene	7.4 U	JB	1.2	9.0
Perylene	ND UJ		4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	6.2		1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	92	X	23 - 84
Chrysene-d12 (Surr)	69		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 SLP10T

Lab Sample ID: 280-33493-4

Date Sampled: 09/19/2012 0813

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7910.D
Dilution:	1.0			Initial Weight/Volume:	4065.1 mL
Analysis Date:	10/12/2012 0027			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.67	5.3
2,3-Dihydroindene	35		0.69	4.9
1-Methylnaphthalene	7.3		0.88	5.5
2-Methylnaphthalene	ND		0.96	5.8
Acenaphthene	42		0.49	5.6
Acenaphthylene	1.8	J	0.76	4.7
Acridine	ND <i>UJ</i>	<i>/</i>	6.4	6.4
Anthracene	ND		0.79	4.1
Benzo[a]anthracene	ND <i>UJ</i>		0.91	4.2
Benzo[a]pyrene	ND <i>R</i>		1.2	2.5
Benzo[e]pyrene	ND <i>UJ</i>		1.1	4.2
Benzo[b]fluoranthene	ND <i>UJ</i>		1.4	4.6
Benzo(b)thiophene	4.0	J	0.74	5.1
Benzo[k]fluoranthene	ND <i>UJ</i>		1.2	4.0
Benzo[g,h,i]perylene	<i>4.5 U</i>	<i>JB</i>	1.2	6.1
Carbazole	0.74	J	0.71	3.7
Chrysene	ND <i>UJ</i>		1.2	5.5
Dibenz(a,h)anthracene	ND <i>R</i>		1.0	5.8
Dibenzofuran	ND		0.97	5.6
Dibenzothiophene	ND		0.96	4.0
Fluoranthene	ND		1.7	4.5
Fluorene	2.8	J	0.84	4.0
Indene	4.4	J	3.2	4.6
Indole	3.0	J	1.7	4.6
Indeno[1,2,3-cd]pyrene	1.4	J	1.2	5.3
Naphthalene	<i>2.0 U</i>	<i>JB</i>	1.1	8.5
Perylene	ND		3.7	3.7
Phenanthrene	ND		3.2	6.2
Pyrene	ND		0.97	4.1
Quinoline	ND		5.6	8.9
Biphenyl	ND		1.0	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	61		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W48

Lab Sample ID: 280-33493-5

Date Sampled: 09/19/2012 1050

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7911.D
Dilution:	1.0			Initial Weight/Volume:	3719.7 mL
Analysis Date:	10/12/2012 0106			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.2	J	0.73	5.8
2,3-Dihydroindene	5.6		0.75	5.4
1-Methylnaphthalene	4.0	J	0.96	6.0
2-Methylnaphthalene	2.5	J	1.1	6.3
Acenaphthene	92		0.54	6.1
Acenaphthylene	4.3	J	0.83	5.2
Acridine	7.1 L	J	7.0	7.0
Anthracene	4.2	J	0.86	4.5
Benzo[a]anthracene	ND UJ		0.99	4.6
Benzo[a]pyrene	ND R		1.3	2.7
Benzo[e]pyrene	ND UJ		1.2	4.6
Benzo[b]fluoranthene	ND UJ		1.5	5.1
Benzo(b)thiophene	12		0.81	5.6
Benzo[k]fluoranthene	ND UJ		1.3	4.4
Benzo[g,h,i]perylene	1.5 U	JB	1.3	6.7
Carbazole	1.5	J	0.77	4.1
Chrysene	ND UJ		1.3	6.0
Dibenz(a,h)anthracene	ND R		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	1.3	J	1.1	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.91	4.4
Indene	47		3.5	5.1
Indole	2.3	J	1.9	5.1
Indeno[1,2,3-cd]pyrene	1.5 L	J	1.4	5.8
Naphthalene	6.3 U	JB	1.2	9.2
Perylene	ND UJ		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	2.9	J	1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	81		23 - 84	
Chrysene-d12 (Surr)	25	X	28 - 101	
Naphthalene-d8 (Surr)	82		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W119

Lab Sample ID: 280-33493-6

Date Sampled: 09/19/2012 1010

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7920.D
Dilution:	1.0			Initial Weight/Volume:	3900.2 mL
Analysis Date:	10/15/2012 1448			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.5
2,3-Dihydroindene	5.3		0.72	5.1
1-Methylnaphthalene	1.7	J	0.91	5.7
2-Methylnaphthalene	1.6	J	1.0	6.1
Acenaphthene	16		0.51	5.8
Acenaphthylene	1.2	J	0.79	4.9
Acridine	7.1	J	6.7	6.7
Anthracene	3.0	J	0.82	4.3
Benzo[a]anthracene	ND		0.94	4.4
Benzo[a]pyrene	ND		1.3	2.6
Benzo[e]pyrene	ND		1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.8
Benzo(b)thiophene	4.6	J	0.77	5.3
Benzo[k]fluoranthene	ND		1.3	4.2
Benzo[g,h,i]perylene	1.7	J	1.2	6.4
Carbazole	1.3	J	0.74	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	ND		1.1	6.1
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	9.9	J	3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	1.6	J	1.3	5.5
Naphthalene	5.5	J	1.2	8.8
Perylene	ND		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	12		1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	85	X	23 - 84	
Chrysene-d12 (Surr)	28		28 - 101	
Naphthalene-d8 (Surr)	85		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 SLP4

Lab Sample ID: 280-33493-7

Date Sampled: 09/19/2012 0928

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7921.D
Dilution:	1.0			Initial Weight/Volume:	4083.4 mL
Analysis Date:	10/15/2012 1527			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.67	5.3
2,3-Dihydroindene	40		0.69	4.9
1-Methylnaphthalene	ND		0.87	5.5
2-Methylnaphthalene	ND		0.96	5.8
Acenaphthene	56		0.49	5.6
Acenaphthylene	4.2	J	0.75	4.7
Acridine	ND <i>UJ</i>	<i>J</i>	6.4	6.4
Anthracene	2.0	J	0.78	4.1
Benzo[a]anthracene	ND <i>UJ</i>		0.90	4.2
Benzo[a]pyrene	ND <i>R</i>		1.2	2.4
Benzo[e]pyrene	ND <i>UJ</i>		1.1	4.2
Benzo[b]fluoranthene	ND <i>UJ</i>		1.4	4.6
Benzo(b)thiophene	6.3		0.73	5.1
Benzo[k]fluoranthene	ND <i>UJ</i>		1.2	4.0
Benzo[g,h,i]perylene	1.6 <i>UJ</i>	<i>JB</i>	1.1	6.1
Carbazole	5.5		0.71	3.7
Chrysene	ND <i>UJ</i>		1.2	5.5
Dibenz(a,h)anthracene	ND <i>R</i>		1.0	5.8
Dibenzofuran	1.1	J	0.97	5.6
Dibenzothiophene	ND		0.96	4.0
Fluoranthene	2.3	J	1.7	4.5
Fluorene	2.5	J	0.83	4.0
Indene	4.0	<i>JK</i>	3.2	4.6
Indole	ND		1.7	4.6
Indeno[1,2,3-cd]pyrene	1.7 <i>U</i>	<i>JB</i>	1.2	5.3
Naphthalene	3.9	<i>J*</i>	1.1	8.4
Perylene	ND <i>UJ</i>		3.7	3.7
Phenanthrene	3.5	J	3.1	6.2
Pyrene	9.2		0.97	4.1
Quinoline	ND		5.5	8.8
Biphenyl	ND		1.0	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	69		28 - 101
Naphthalene-d8 (Surr)	84		22 - 97

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Date Sampled: 09/19/2012 0850

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7922.D
Dilution:	1.0			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/15/2012 1607			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	2.5	J	0.72	5.7
Acenaphthylene	140		0.81	5.1
Acridine	310 L	-	6.9	6.9
Anthracene	210		0.84	4.4
Benzo[a]anthracene	190 J		0.97	4.5
Benzo[a]pyrene	10 L		1.3	2.6
Benzo[e]pyrene	7.3 L		1.2	4.5
Benzo[b]fluoranthene	23 L		1.5	5.0
Benzo(b)thiophene	83		0.79	5.5
Benzo[k]fluoranthene	ND UJ		1.3	4.3
Benzo[g,h,i]perylene	24 UJ	JB	1.2	6.5
Carbazole	170		0.76	4.0
Chrysene	110 J		1.3	5.9
Dibenz(a,h)anthracene	1.2 L	J	1.1	6.2
Indene	55	J	3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	2.2 U	JB	1.3	5.7
Perylene	ND UJ		4.0	4.0
Quinoline	24		6.0	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	57		28 - 101
Naphthalene-d8 (Surr)	77		22 - 97

gen Kasse
2/26/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Date Sampled: 09/19/2012 0850

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142406	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7935.D
Dilution:	10			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/16/2012 1520	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Dihydroindene	410		7.4	53
1-Methylnaphthalene	1200		9.4	59
2-Methylnaphthalene	640		10	62
Dibenzofuran	1000		10	60
Dibenzothiophene	380		10	43
Fluoranthene	1800		18	49
Fluorene	2500		9.0	43
Naphthalene	1600		12	91
Phenanthrene	1300		34	66
Pyrene	1700		10	44
Biphenyl	520		11	59

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	90	D	23 - 84
Chrysene-d12 (Surr)	59	D	28 - 101
Naphthalene-d8 (Surr)	81	D	22 - 97

ju Rasm
2/26/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8

Client Matrix: Water

Date Sampled: 09/19/2012 0850

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142406	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7936.D
Dilution:	20			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/16/2012 1559	Run Type:	DL2	Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	3100		11	120
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	87	D	23 - 84	
Chrysene-d12 (Surr)	49	D	28 - 101	
Naphthalene-d8 (Surr)	77	D	22 - 97	

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 E7

Lab Sample ID: 280-33493-9

Date Sampled: 09/19/2012 1235

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7923.D
Dilution:	1.0			Initial Weight/Volume:	3926.6 mL
Analysis Date:	10/15/2012 1646			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	3.8	J	0.71	5.1
1-Methylnaphthalene	1.1	J	0.91	5.7
2-Methylnaphthalene	ND		1.0	6.0
Acenaphthene	8.6		0.51	5.8
Acenaphthylene	ND		0.78	4.9
Acridine	ND <i>WJ</i>	<i>J</i>	6.6	6.6
Anthracene	1.7	J	0.81	4.3
Benzo[a]anthracene	1.5	J	0.94	4.4
Benzo[a]pyrene	1.4 <i>L</i>	<i>J</i>	1.3	2.5
Benzo[e]pyrene	ND <i>WJ</i>		1.2	4.4
Benzo[b]fluoranthene	2.0 <i>U</i>	<i>J</i>	1.4	4.8
Benzo(b)thiophene	3.1	J	0.76	5.3
Benzo[k]fluoranthene	2.2 <i>L</i>	<i>J</i>	1.3	4.2
Benzo[g,h,i]perylene	2.7 <i>WJ</i>	<i>JB</i>	1.2	6.3
Carbazole	1.1	J	0.73	3.9
Chrysene	1.9 <i>WJ</i>	<i>J</i>	1.3	5.7
Dibenz(a,h)anthracene	2.3 <i>L</i>	<i>J</i>	1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	2.3	J	1.7	4.7
Fluorene	ND		0.87	4.2
Indene	6.1	*	3.3	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	2.8 <i>U</i>	<i>JB</i>	1.3	5.5
Naphthalene	4.1 <i>U</i>	<i>J</i>	1.2	8.8
Perylene	ND <i>WJ</i>		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	2.6	J	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	78		23 - 84	
Chrysene-d12 (Surr)	49		28 - 101	
Naphthalene-d8 (Surr)	80		22 - 97	

Gu Rasmussen
2/26/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10FD

Date Sampled: 09/19/2012 1235

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7926.D
Dilution:	1.0			Initial Weight/Volume:	3687.5 mL
Analysis Date:	10/15/2012 1843			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.74	5.9
2,3-Dihydroindene	4.5	J	0.76	5.4
1-Methylnaphthalene	1.5	J	0.97	6.1
2-Methylnaphthalene	4.7 U	J	1.1	6.4
Acenaphthene	9.6		0.54	6.2
Acenaphthylene	ND		0.84	5.2
Acridine	ND UJ	J	7.1	7.1
Anthracene	1.7	J	0.87	4.6
Benzo[a]anthracene	1.0	J	1.0	4.7
Benzo[a]pyrene	1.3 L	J	1.3	2.7
Benzo[e]pyrene	ND UJ		1.2	4.7
Benzo[b]fluoranthene	ND UJ		1.5	5.1
Benzo(b)thiophene	3.5	J	0.81	5.6
Benzo[k]fluoranthene	1.5 L	J	1.3	4.4
Benzo[g,h,i]perylene	2.3 UJ	J	1.3	6.7
Carbazole	1.2	J	0.78	4.1
Chrysene	ND UJ		1.3	6.1
Dibenz(a,h)anthracene	1.5 L	J	1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	1.8	J	1.8	5.0
Fluorene	ND		0.92	4.4
Indene	6.5	J	3.6	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	2.1 U	J	1.4	5.9
Naphthalene	6.8 U	J	1.2	9.3
Perylene	ND UJ		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	2.4	J	1.1	4.6
Quinoline	ND		6.1	9.8
Biphenyl	ND		1.1	6.1
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	88	X	23 - 84	
Chrysene-d12 (Surr)	60		28 - 101	
Naphthalene-d8 (Surr)	89		22 - 97	

Jim Rossi
2/26/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 E7FB

Lab Sample ID: 280-33493-11FB

Date Sampled: 09/19/2012 1235

Client Matrix: Water

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7927.D
Dilution:	1.0			Initial Weight/Volume:	3131.2 mL
Analysis Date:	10/15/2012 1922			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.87	6.9
2,3-Dihydroindene	ND		0.89	6.4
1-Methylnaphthalene	ND		1.1	7.2
2-Methylnaphthalene	ND		1.3	7.5
Acenaphthene	ND		0.64	7.3
Acenaphthylene	ND		0.98	6.1
Acridine	ND UJ	/	8.3	8.3
Anthracene	ND		1.0	5.4
Benzo[a]anthracene	ND UJ		1.2	5.5
Benzo[a]pyrene	ND R		1.6	3.2
Benzo[e]pyrene	ND UJ		1.5	5.5
Benzo[b]fluoranthene	ND UJ		1.8	6.0
Benzo(b)thiophene	ND		0.96	6.6
Benzo[k]fluoranthene	ND UJ		1.6	5.2
Benzo[g,h,i]perylene	2.2 UJ	JB	1.5	7.9
Carbazole	ND		0.92	4.9
Chrysene	ND UJ		1.6	7.2
Dibenz(a,h)anthracene	ND R		1.3	7.5
Dibenzofuran	ND		1.3	7.3
Dibenzothiophene	ND		1.3	5.2
Fluoranthene	ND		2.2	5.9
Fluorene	ND		1.1	5.2
Indene	ND	*	4.2	6.0
Indole	ND		2.2	6.0
Indeno[1,2,3-cd]pyrene	1.9 U	JB	1.6	6.9
Naphthalene	2.7 U J	J*	1.5	11
Perylene	ND UJ		4.9	4.9
Phenanthrene	ND		4.1	8.0
Pyrene	ND		1.3	5.4
Quinoline	ND		7.2	11
Biphenyl	ND		1.3	7.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	73		23 - 84
Chrysene-d12 (Surr)	105	X	28 - 101
Naphthalene-d8 (Surr)	77		22 - 97

Jim Rasmussen
2/26/13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

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Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-35162-1

Client Project/Site: CSLP - Reilly Tar & Chemical


For:

Summit Envirosolutions Inc

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Saint Paul, Minnesota 55108

Attn: William M Gregg



Authorized for release by:

11/16/2012 12:33:39 PM

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Job ID: 280-35162-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-35162-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Three samples were received under chain of custody on October 26, 2012. The samples were received at temperatures of 3.0°C, 3.4°C and 3.2°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

Low levels of 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Dibenzofuran, Fluoranthene, Fluorene, Naphthalene and Pyrene are present in the method blank associated with prep batch 280-145276. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

The LCS associated with prep batch 280-145276 exhibited percent recoveries below the QC control limits for 3-Methylcholanthrene at 8% (limits 30-150%), Perylene at 4% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 19% (limits 30-150%). 3-Methylcholanthrene and 7,12-Dimethylbenz(a)anthracene are not compounds of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "**".

The MS/MSD associated with prep batch 280-145276 was performed using sample E7-102512 (280-35162-1), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylcholanthrene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indeno[1,2,3-cd]pyrene	Perylene
Fluorene-d10		

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-35162-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	2
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	9	9
Samples and QC Internal Standard Area	21	21
TOTAL	163	160
% Completeness	98.2%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-35162-1					
Sample: E7-102512			DUP: E7D-102512		
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	7.8	Acenaphthene	7.3	6.6	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	1.4	Anthracene	1.4	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	3.3	Benzo(b)thiophene	3.1	6.2	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	0.88	Carbazole	ND	NC	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	3.2	2,3-Dihydroindene	3.2	0.0	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	5.8	Indene	5.4	7.1	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	1.4	2-Methylnaphthalene	1.5	6.9	
1-Methylnaphthalene	1.1	1-Methylnaphthalene	1.2	8.7	
Naphthalene	3.7	Naphthalene	4.5	19.5	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	1.7	Pyrene	1.6	6.1	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Client Sample ID: E7-102512

Lab Sample ID: 280-35162-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	3.2	J	5.1	0.72	ng/L			1	8270C SIM	Total/NA
1-Methylnaphthalene	1.1	J B	5.7	0.91	ng/L			1	8270C SIM	Total/NA
2-Methylnaphthalene	1.4	J B	6.0	1.0	ng/L			1	8270C SIM	Total/NA
Acenaphthene	7.8	B	5.8	0.51	ng/L			1	8270C SIM	Total/NA
Anthracene	1.4	J B	4.3	0.82	ng/L			1	8270C SIM	Total/NA
Benzo(b)thiophene	3.3	J	5.3	0.77	ng/L			1	8270C SIM	Total/NA
Carbazole	0.88	J	3.9	0.74	ng/L			1	8270C SIM	Total/NA
Indene	5.8		4.8	3.4	ng/L			1	8270C SIM	Total/NA
Naphthalene	3.7	J B	8.8	1.2	ng/L			1	8270C SIM	Total/NA
Pyrene	1.7	J B	4.3	1.0	ng/L			1	8270C SIM	Total/NA

Client Sample ID: E7D-102512

Lab Sample ID: 280-35162-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
2,3-Dihydroindene	3.2	J	5.4	0.75	ng/L			1	8270C SIM	Total/NA
1-Methylnaphthalene	1.2	J B	6.0	0.96	ng/L			1	8270C SIM	Total/NA
2-Methylnaphthalene	1.5	J B	6.3	1.1	ng/L			1	8270C SIM	Total/NA
Acenaphthene	7.3	B	6.1	0.54	ng/L			1	8270C SIM	Total/NA
Anthracene	1.4	J B	4.5	0.86	ng/L			1	8270C SIM	Total/NA
Benzo(b)thiophene	3.1	J	5.6	0.81	ng/L			1	8270C SIM	Total/NA
Indene	5.4		5.0	3.5	ng/L			1	8270C SIM	Total/NA
Naphthalene	4.5	J B	9.2	1.2	ng/L			1	8270C SIM	Total/NA
Pyrene	1.6	J B	4.5	1.1	ng/L			1	8270C SIM	Total/NA

Client Sample ID: E7FB-102512

Lab Sample ID: 280-35162-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1-Methylnaphthalene	1.5	J B	5.9	0.93	ng/L			1	8270C SIM	Total/NA
2-Methylnaphthalene	2.0	J B	6.2	1.0	ng/L			1	8270C SIM	Total/NA
Benzo[a]anthracene	1.8	J	4.5	0.96	ng/L			1	8270C SIM	Total/NA
Benzo[k]fluoranthene	1.6	J	4.3	1.3	ng/L			1	8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.8	J	6.5	1.2	ng/L			1	8270C SIM	Total/NA
Chrysene	2.5	J	5.9	1.3	ng/L			1	8270C SIM	Total/NA
Dibenz(a,h)anthracene	1.4	J	6.2	1.1	ng/L			1	8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.4	J	5.6	1.3	ng/L			1	8270C SIM	Total/NA
Naphthalene	4.3	J B	9.0	1.2	ng/L			1	8270C SIM	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method	Method Description	Protocol	Laboratory
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-35162-1	E7-102512	Water	10/25/12 13:30	10/26/12 09:30
280-35162-2	E7D-102512	Water	10/25/12 13:30	10/26/12 09:30
280-35162-3	E7FB-102512	Water	10/25/12 13:30	10/26/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Client Sample ID: E7-102512

Lab Sample ID: 280-35162-1

Date Collected: 10/25/12 13:30

Matrix: Water

Date Received: 10/26/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.70	ng/L		11/01/12 13:45	11/13/12 22:49	1
2,3-Dihydroindene	3.2	J	5.1	0.72	ng/L		11/01/12 13:45	11/13/12 22:49	1
1-Methylnaphthalene	1.1	J B	5.7	0.91	ng/L		11/01/12 13:45	11/13/12 22:49	1
2-Methylnaphthalene	1.4	J B	6.0	1.0	ng/L		11/01/12 13:45	11/13/12 22:49	1
Acenaphthene	7.8	B	5.8	0.51	ng/L		11/01/12 13:45	11/13/12 22:49	1
Acenaphthylene	ND		4.9	0.79	ng/L		11/01/12 13:45	11/13/12 22:49	1
Acridine	ND		6.7	6.7	ng/L		11/01/12 13:45	11/13/12 22:49	1
Anthracene	1.4	J B	4.3	0.82	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[a]anthracene	ND		4.4	0.94	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[b]fluoranthene	ND		4.8	1.4	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo(b)thiophene	3.3	J	5.3	0.77	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		11/01/12 13:45	11/13/12 22:49	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		11/01/12 13:45	11/13/12 22:49	1
Carbazole	0.88	J	3.9	0.74	ng/L		11/01/12 13:45	11/13/12 22:49	1
Chrysene	ND		5.7	1.3	ng/L		11/01/12 13:45	11/13/12 22:49	1
Dibenz(a,h)anthracene	ND		6.0	1.1	ng/L		11/01/12 13:45	11/13/12 22:49	1
Dibenzofuran	ND		5.8	1.0	ng/L		11/01/12 13:45	11/13/12 22:49	1
Dibenzothiophene	ND		4.2	1.0	ng/L		11/01/12 13:45	11/13/12 22:49	1
Fluoranthene	ND		4.7	1.7	ng/L		11/01/12 13:45	11/13/12 22:49	1
Fluorene	ND		4.2	0.87	ng/L		11/01/12 13:45	11/13/12 22:49	1
Indene	5.8		4.8	3.4	ng/L		11/01/12 13:45	11/13/12 22:49	1
Indole	ND		4.8	1.8	ng/L		11/01/12 13:45	11/13/12 22:49	1
Indeno[1,2,3-cd]pyrene	ND		5.5	1.3	ng/L		11/01/12 13:45	11/13/12 22:49	1
Naphthalene	3.7	J B	8.8	1.2	ng/L		11/01/12 13:45	11/13/12 22:49	1
Perylene	ND	*	3.9	3.9	ng/L		11/01/12 13:45	11/13/12 22:49	1
Phenanthrene	ND		6.5	3.3	ng/L		11/01/12 13:45	11/13/12 22:49	1
Pyrene	1.7	J B	4.3	1.0	ng/L		11/01/12 13:45	11/13/12 22:49	1
Quinoline	ND		9.2	5.8	ng/L		11/01/12 13:45	11/13/12 22:49	1
Biphenyl	ND		5.7	1.1	ng/L		11/01/12 13:45	11/13/12 22:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	84		23 - 84	11/01/12 13:45	11/13/12 22:49	1
Chrysene-d12 (Surr)	54		28 - 101	11/01/12 13:45	11/13/12 22:49	1
Naphthalene-d8 (Surr)	81		22 - 97	11/01/12 13:45	11/13/12 22:49	1

TestAmerica Denver

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Client Sample ID: E7D-102512

Lab Sample ID: 280-35162-2

Date Collected: 10/25/12 13:30

Matrix: Water

Date Received: 10/26/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.8	0.73	ng/L		11/01/12 13:45	11/14/12 00:45	1
2,3-Dihydroindene	3.2	J	5.4	0.75	ng/L		11/01/12 13:45	11/14/12 00:45	1
1-Methylnaphthalene	1.2	J B	6.0	0.96	ng/L		11/01/12 13:45	11/14/12 00:45	1
2-Methylnaphthalene	1.5	J B	6.3	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Acenaphthene	7.3	B	6.1	0.54	ng/L		11/01/12 13:45	11/14/12 00:45	1
Acenaphthylene	ND		5.2	0.83	ng/L		11/01/12 13:45	11/14/12 00:45	1
Acridine	ND		7.0	7.0	ng/L		11/01/12 13:45	11/14/12 00:45	1
Anthracene	1.4	J B	4.5	0.86	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo(b)thiophene	3.1	J	5.6	0.81	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		11/01/12 13:45	11/14/12 00:45	1
Benzo[g,h,i]perylene	ND		6.7	1.3	ng/L		11/01/12 13:45	11/14/12 00:45	1
Carbazole	ND		4.1	0.77	ng/L		11/01/12 13:45	11/14/12 00:45	1
Chrysene	ND		6.0	1.3	ng/L		11/01/12 13:45	11/14/12 00:45	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Dibenzofuran	ND		6.1	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Dibenzothiophene	ND		4.4	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Fluoranthene	ND		4.9	1.8	ng/L		11/01/12 13:45	11/14/12 00:45	1
Fluorene	ND		4.4	0.91	ng/L		11/01/12 13:45	11/14/12 00:45	1
Indene	5.4		5.0	3.5	ng/L		11/01/12 13:45	11/14/12 00:45	1
Indole	ND		5.0	1.9	ng/L		11/01/12 13:45	11/14/12 00:45	1
Indeno[1,2,3-cd]pyrene	ND		5.8	1.4	ng/L		11/01/12 13:45	11/14/12 00:45	1
Naphthalene	4.5	J B	9.2	1.2	ng/L		11/01/12 13:45	11/14/12 00:45	1
Perylene	ND	*	4.1	4.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Phenanthrene	ND		6.8	3.4	ng/L		11/01/12 13:45	11/14/12 00:45	1
Pyrene	1.6	J B	4.5	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Quinoline	ND		9.7	6.1	ng/L		11/01/12 13:45	11/14/12 00:45	1
Biphenyl	ND		6.0	1.1	ng/L		11/01/12 13:45	11/14/12 00:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	78		23 - 84	11/01/12 13:45	11/14/12 00:45	1
Chrysene-d12 (Surr)	64		28 - 101	11/01/12 13:45	11/14/12 00:45	1
Naphthalene-d8 (Surr)	79		22 - 97	11/01/12 13:45	11/14/12 00:45	1

TestAmerica Denver

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Client Sample ID: E7FB-102512

Lab Sample ID: 280-35162-3

Date Collected: 10/25/12 13:30

Matrix: Water

Date Received: 10/26/12 09:30

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.71	ng/L		11/01/12 13:45	11/14/12 01:24	1
2,3-Dihydroindene	ND		5.2	0.73	ng/L		11/01/12 13:45	11/14/12 01:24	1
1-Methylnaphthalene	1.5	J B	5.9	0.93	ng/L		11/01/12 13:45	11/14/12 01:24	1
2-Methylnaphthalene	2.0	J B	6.2	1.0	ng/L		11/01/12 13:45	11/14/12 01:24	1
Acenaphthene	ND		6.0	0.52	ng/L		11/01/12 13:45	11/14/12 01:24	1
Acenaphthylene	ND		5.0	0.81	ng/L		11/01/12 13:45	11/14/12 01:24	1
Acridine	ND		6.8	6.8	ng/L		11/01/12 13:45	11/14/12 01:24	1
Anthracene	ND		4.4	0.84	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[a]anthracene	1.8	J	4.5	0.96	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo(b)thiophene	ND		5.4	0.78	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[k]fluoranthene	1.6	J	4.3	1.3	ng/L		11/01/12 13:45	11/14/12 01:24	1
Benzo[g,h,i]perylene	1.8	J	6.5	1.2	ng/L		11/01/12 13:45	11/14/12 01:24	1
Carbazole	ND		4.0	0.75	ng/L		11/01/12 13:45	11/14/12 01:24	1
Chrysene	2.5	J	5.9	1.3	ng/L		11/01/12 13:45	11/14/12 01:24	1
Dibenz(a,h)anthracene	1.4	J	6.2	1.1	ng/L		11/01/12 13:45	11/14/12 01:24	1
Dibenzofuran	ND		6.0	1.0	ng/L		11/01/12 13:45	11/14/12 01:24	1
Dibenzothiophene	ND		4.3	1.0	ng/L		11/01/12 13:45	11/14/12 01:24	1
Fluoranthene	ND		4.8	1.8	ng/L		11/01/12 13:45	11/14/12 01:24	1
Fluorene	ND		4.3	0.89	ng/L		11/01/12 13:45	11/14/12 01:24	1
Indene	ND		4.9	3.4	ng/L		11/01/12 13:45	11/14/12 01:24	1
Indole	ND		4.9	1.8	ng/L		11/01/12 13:45	11/14/12 01:24	1
Indeno[1,2,3-cd]pyrene	1.4	J	5.6	1.3	ng/L		11/01/12 13:45	11/14/12 01:24	1
Naphthalene	4.3	J B	9.0	1.2	ng/L		11/01/12 13:45	11/14/12 01:24	1
Perylene	ND	*	4.0	4.0	ng/L		11/01/12 13:45	11/14/12 01:24	1
Phenanthrene	ND		6.6	3.4	ng/L		11/01/12 13:45	11/14/12 01:24	1
Pyrene	ND		4.4	1.0	ng/L		11/01/12 13:45	11/14/12 01:24	1
Quinoline	ND		9.4	5.9	ng/L		11/01/12 13:45	11/14/12 01:24	1
Biphenyl	ND		5.9	1.1	ng/L		11/01/12 13:45	11/14/12 01:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	70		23 - 84	11/01/12 13:45	11/14/12 01:24	1
Chrysene-d12 (Surr)	98		28 - 101	11/01/12 13:45	11/14/12 01:24	1
Naphthalene-d8 (Surr)	79		22 - 97	11/01/12 13:45	11/14/12 01:24	1

TestAmerica Denver

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FD10 (23-84)	Chrysene-d12 (Surr) (28-101)	Naphthalene-d8 (Surr) (22-97)
280-35162-1	E7-102512	84	54	81
280-35162-1 MS	E7-102512	86 X	70	85
280-35162-1 MSD	E7-102512	82	59	83
280-35162-2	E7D-102512	78	64	79
280-35162-3	E7FB-102512	70	98	79
LCS 280-145276/2-A	Lab Control Sample	79	90	84
MB 280-145276/1-A	Method Blank	76	85	86

Surrogate Legend

FD10 = Fluorene-d10 (Surr)

Chrysene-d12 (Surr) = Chrysene-d12 (Surr)

Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-145276/1-A

Matrix: Water

Analysis Batch: 147248

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 145276

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		11/01/12 13:45	11/13/12 20:14	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		11/01/12 13:45	11/13/12 20:14	1
1-Methylnaphthalene	3.69	J	5.6	0.89	ng/L		11/01/12 13:45	11/13/12 20:14	1
2-Methylnaphthalene	3.87	J	5.9	0.98	ng/L		11/01/12 13:45	11/13/12 20:14	1
Acenaphthene	1.85	J	5.7	0.50	ng/L		11/01/12 13:45	11/13/12 20:14	1
Acenaphthylene	1.81	J	4.8	0.77	ng/L		11/01/12 13:45	11/13/12 20:14	1
Acridine	ND		6.5	6.5	ng/L		11/01/12 13:45	11/13/12 20:14	1
Anthracene	1.12	J	4.2	0.80	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		11/01/12 13:45	11/13/12 20:14	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		11/01/12 13:45	11/13/12 20:14	1
Carbazole	ND		3.8	0.72	ng/L		11/01/12 13:45	11/13/12 20:14	1
Chrysene	ND		5.6	1.2	ng/L		11/01/12 13:45	11/13/12 20:14	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		11/01/12 13:45	11/13/12 20:14	1
Dibenzofuran	2.48	J	5.7	0.99	ng/L		11/01/12 13:45	11/13/12 20:14	1
Dibenzothiophene	ND		4.1	0.98	ng/L		11/01/12 13:45	11/13/12 20:14	1
Fluoranthene	2.71	J	4.6	1.7	ng/L		11/01/12 13:45	11/13/12 20:14	1
Fluorene	1.33	J	4.1	0.85	ng/L		11/01/12 13:45	11/13/12 20:14	1
Indene	ND		4.7	3.3	ng/L		11/01/12 13:45	11/13/12 20:14	1
Indole	ND		4.7	1.7	ng/L		11/01/12 13:45	11/13/12 20:14	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		11/01/12 13:45	11/13/12 20:14	1
Naphthalene	6.11	J	8.6	1.1	ng/L		11/01/12 13:45	11/13/12 20:14	1
Perylene	ND		3.8	3.8	ng/L		11/01/12 13:45	11/13/12 20:14	1
Phenanthrene	ND		6.3	3.2	ng/L		11/01/12 13:45	11/13/12 20:14	1
Pyrene	2.04	J	4.2	0.99	ng/L		11/01/12 13:45	11/13/12 20:14	1
Quinoline	ND		9.0	5.7	ng/L		11/01/12 13:45	11/13/12 20:14	1
Biphenyl	ND		5.6	1.1	ng/L		11/01/12 13:45	11/13/12 20:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorene-d10 (Surr)	76		23 - 84	11/01/12 13:45	11/13/12 20:14	1
Chrysene-d12 (Surr)	85		28 - 101	11/01/12 13:45	11/13/12 20:14	1
Naphthalene-d8 (Surr)	86		22 - 97	11/01/12 13:45	11/13/12 20:14	1

Lab Sample ID: LCS 280-145276/2-A

Matrix: Water

Analysis Batch: 147248

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	61.0		ng/L		81	30 - 150
2,3-Dihydroindene	75.0	59.3		ng/L		79	30 - 150
1-Methylnaphthalene	75.0	62.3		ng/L		83	30 - 150
2-Methylnaphthalene	75.0	62.2		ng/L		83	25 - 95
3-Methylcholanthrene	75.0	6.22	*	ng/L		8	30 - 150
Acenaphthene	75.0	61.0		ng/L		81	30 - 150

TestAmerica Denver

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-145276/2-A

Matrix: Water

Analysis Batch: 147248

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	75.0	52.4		ng/L		70	30 - 150
Acridine	75.0	31.9		ng/L		43	30 - 150
Anthracene	75.0	53.8		ng/L		72	30 - 150
Benzo[a]anthracene	75.0	70.8		ng/L		94	30 - 150
Benzo[a]pyrene	75.0	26.2		ng/L		35	30 - 150
Benzo[e]pyrene	75.0	70.9		ng/L		95	37 - 105
Benzo[b]fluoranthene	75.0	68.5		ng/L		91	30 - 150
Benzo(b)thiophene	75.0	61.8		ng/L		82	30 - 150
Benzo[k]fluoranthene	75.0	73.4		ng/L		98	30 - 150
Benzo[g,h,i]perylene	75.0	61.1		ng/L		82	30 - 150
Carbazole	75.0	62.6		ng/L		83	30 - 150
Chrysene	75.0	75.5		ng/L		101	20 - 136
Dibenz(a,h)anthracene	75.0	73.4		ng/L		98	30 - 150
Dibenzofuran	75.0	62.2		ng/L		83	30 - 150
Dibenzothiophene	75.0	63.5		ng/L		85	30 - 150
Fluoranthene	75.0	66.6		ng/L		89	30 - 150
Fluorene	75.0	61.1		ng/L		81	34 - 96
Indene	75.0	58.1		ng/L		77	22 - 86
Indole	75.0	23.9		ng/L		32	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	67.2		ng/L		90	30 - 150
Naphthalene	75.0	64.2		ng/L		86	27 - 95
Perylene	75.0	ND	*	ng/L		4	30 - 150
Phenanthrene	75.0	63.4		ng/L		84	30 - 150
Pyrene	75.0	66.2		ng/L		88	30 - 150
Quinoline	75.0	54.3		ng/L		72	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	14.0	*	ng/L		19	30 - 150
Biphenyl	75.0	62.9		ng/L		84	30 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorene-d10 (Surr)	79		23 - 84
Chrysene-d12 (Surr)	90		28 - 101
Naphthalene-d8 (Surr)	84		22 - 97

Lab Sample ID: 280-35162-1 MS

Matrix: Water

Analysis Batch: 147248

Client Sample ID: E7-102512

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		74.9	62.9		ng/L		84	30 - 150
2,3-Dihydroindene	3.2	J	74.9	63.8		ng/L		81	30 - 150
1-Methylnaphthalene	1.1	J B	74.9	65.4		ng/L		86	30 - 150
2-Methylnaphthalene	1.4	J B	74.9	65.8		ng/L		86	25 - 95
3-Methylcholanthrene	ND		74.9	13.6	F	ng/L		18	30 - 150
Acenaphthene	7.8	B	74.9	73.2		ng/L		87	30 - 150
Acenaphthylene	ND		74.9	66.1		ng/L		88	30 - 150
Acridine	ND		74.9	57.5		ng/L		77	30 - 150
Anthracene	1.4	J B	74.9	73.9		ng/L		97	30 - 150
Benzo[a]anthracene	ND		74.9	59.6		ng/L		80	30 - 150

TestAmerica Denver

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-35162-1 MS

Matrix: Water

Analysis Batch: 147248

Client Sample ID: E7-102512

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]pyrene	ND		74.9	13.9	F	ng/L		19	30 - 150
Benzo[e]pyrene	ND		74.9	14.0	F	ng/L		19	37 - 105
Benzo[b]fluoranthene	ND		74.9	17.1	F	ng/L		23	30 - 150
Benzo(b)thiophene	3.3	J	74.9	65.2		ng/L		83	30 - 150
Benzo[k]fluoranthene	ND		74.9	14.5	F	ng/L		19	30 - 150
Benzo[g,h,i]perylene	ND		74.9	3.98	J F	ng/L		5	30 - 150
Carbazole	0.88	J	74.9	77.9		ng/L		103	30 - 150
Chrysene	ND		74.9	56.3		ng/L		75	20 - 136
Dibenz(a,h)anthracene	ND		74.9	3.68	J F	ng/L		5	30 - 150
Dibenzofuran	ND		74.9	65.4		ng/L		87	30 - 150
Dibenzothiophene	ND		74.9	69.1		ng/L		92	30 - 150
Fluoranthene	ND		74.9	76.9		ng/L		103	30 - 150
Fluorene	ND		74.9	62.9		ng/L		84	34 - 96
Indene	5.8		74.9	67.9		ng/L		83	22 - 86
Indole	ND		74.9	62.1		ng/L		83	30 - 150
Indeno[1,2,3-cd]pyrene	ND		74.9	3.91	J F	ng/L		5	30 - 150
Naphthalene	3.7	J B	74.9	68.3		ng/L		86	27 - 95
Perylene	ND	*	74.9	14.6	F	ng/L		19	30 - 150
Phenanthrene	ND		74.9	66.4		ng/L		89	30 - 150
Pyrene	1.7	J B	74.9	76.5		ng/L		100	30 - 150
Quinoline	ND		74.9	64.7		ng/L		86	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		74.9	76.7		ng/L		102	30 - 150
Biphenyl	ND		74.9	64.8		ng/L		87	30 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	70		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Lab Sample ID: 280-35162-1 MSD

Matrix: Water

Analysis Batch: 147248

Client Sample ID: E7-102512

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
2,3-Benzofuran	ND		77.0	62.3		ng/L		81	30 - 150	1	50
2,3-Dihydroindene	3.2	J	77.0	63.4		ng/L		78	30 - 150	1	50
1-Methylnaphthalene	1.1	J B	77.0	65.8		ng/L		84	30 - 150	1	50
2-Methylnaphthalene	1.4	J B	77.0	65.8		ng/L		84	25 - 95	0	50
3-Methylcholanthrene	ND		77.0	11.0	F	ng/L		14	30 - 150	21	50
Acenaphthene	7.8	B	77.0	71.6		ng/L		83	30 - 150	2	50
Acenaphthylene	ND		77.0	67.5		ng/L		88	30 - 150	2	50
Acridine	ND		77.0	37.2		ng/L		48	30 - 150	43	50
Anthracene	1.4	J B	77.0	72.2		ng/L		92	30 - 150	2	50
Benzo[a]anthracene	ND		77.0	52.0		ng/L		68	30 - 150	14	50
Benzo[a]pyrene	ND		77.0	11.1	F	ng/L		14	30 - 150	22	50
Benzo[e]pyrene	ND		77.0	11.1	F	ng/L		14	37 - 105	23	50
Benzo[b]fluoranthene	ND		77.0	14.6	F	ng/L		19	30 - 150	16	50
Benzo(b)thiophene	3.3	J	77.0	64.8		ng/L		80	30 - 150	1	50

TestAmerica Denver

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-35162-1 MSD

Matrix: Water

Analysis Batch: 147248

Client Sample ID: E7-102512

Prep Type: Total/NA

Prep Batch: 145276

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	ND		77.0	13.4	F	ng/L		17	30 - 150	8	50
Benzo[g,h,i]perylene	ND		77.0	4.71	J F	ng/L		6	30 - 150	17	50
Carbazole	0.88	J	77.0	77.2		ng/L		99	30 - 150	1	50
Chrysene	ND		77.0	50.8		ng/L		66	20 - 136	10	50
Dibenz(a,h)anthracene	ND		77.0	4.59	J F	ng/L		6	30 - 150	22	50
Dibenzofuran	ND		77.0	65.0		ng/L		84	30 - 150	1	50
Dibenzothiophene	ND		77.0	67.6		ng/L		88	30 - 150	2	50
Fluoranthene	ND		77.0	75.3		ng/L		98	30 - 150	2	50
Fluorene	ND		77.0	63.5		ng/L		82	34 - 96	1	50
Indene	5.8		77.0	67.4		ng/L		80	22 - 86	1	50
Indole	ND		77.0	62.5		ng/L		81	30 - 150	1	50
Indeno[1,2,3-cd]pyrene	ND		77.0	4.48	J F	ng/L		6	30 - 150	14	50
Naphthalene	3.7	J B	77.0	68.5		ng/L		84	27 - 95	0	50
Perylene	ND	*	77.0	11.5	F	ng/L		15	30 - 150	24	50
Phenanthrene	ND		77.0	63.8		ng/L		83	30 - 150	4	50
Pyrene	1.7	J B	77.0	74.5		ng/L		95	30 - 150	3	50
Quinoline	ND		77.0	61.9		ng/L		80	20 - 112	4	50
7,12-Dimethylbenz(a)anthracene	ND		77.0	73.4		ng/L		95	30 - 150	4	50
Biphenyl	ND		77.0	64.5		ng/L		84	30 - 150	0	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	59		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

TestAmerica Denver

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

GC/MS Semi VOA

Prep Batch: 145276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-35162-1	E7-102512	Total/NA	Water	3520C	
280-35162-1 MS	E7-102512	Total/NA	Water	3520C	
280-35162-1 MSD	E7-102512	Total/NA	Water	3520C	
280-35162-2	E7D-102512	Total/NA	Water	3520C	
280-35162-3	E7FB-102512	Total/NA	Water	3520C	
LCS 280-145276/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-145276/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 147248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-35162-1	E7-102512	Total/NA	Water	8270C SIM	145276
280-35162-1 MS	E7-102512	Total/NA	Water	8270C SIM	145276
280-35162-1 MSD	E7-102512	Total/NA	Water	8270C SIM	145276
280-35162-2	E7D-102512	Total/NA	Water	8270C SIM	145276
280-35162-3	E7FB-102512	Total/NA	Water	8270C SIM	145276
LCS 280-145276/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	145276
MB 280-145276/1-A	Method Blank	Total/NA	Water	8270C SIM	145276

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Client Sample ID: E7-102512

Date Collected: 10/25/12 13:30

Date Received: 10/26/12 09:30

Lab Sample ID: 280-35162-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3903.2 mL	1000 uL	145276	11/01/12 13:45	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			147248	11/13/12 22:49	KGV	TAL DEN

Client Sample ID: E7D-102512

Date Collected: 10/25/12 13:30

Date Received: 10/26/12 09:30

Lab Sample ID: 280-35162-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3725.3 mL	1000 uL	145276	11/01/12 13:45	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			147248	11/14/12 00:45	KGV	TAL DEN

Client Sample ID: E7FB-102512

Date Collected: 10/25/12 13:30

Date Received: 10/26/12 09:30

Lab Sample ID: 280-35162-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3824.4 mL	1000 uL	145276	11/01/12 13:45	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			147248	11/14/12 01:24	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-35162-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-13
Connecticut	State Program	1	PH-0686	09-30-14
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-13
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-30-13
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	11-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-13
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-13
Tennessee	State Program	4	TN02944	09-30-13
Texas	NELAC	6	T104704183-08-TX	09-30-13
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-13
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-13
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-13
Wyoming (UST)	A2LA	8		10-31-13

TestAmerica

TAL-4124-280 (0508)

THE LEADER IN ENVIRONMENTAL TESTING

Client <i>Summit Environmental, Inc</i>	Project Manager <i>Bill Greys</i>	Chain of Custody Number 174241
Address <i>1217 Bendana Blvd</i>	Telephone Number (Area Code) Ext Number <i>651 262 4236</i>	Date
		Lab Number
		Page <u> </u> of <u> </u>

Special Instructions/
Conditions of Receipt[illegible]

Possible Hazard Identification

longer than 1 month)

QC Requirements (Specify)

Turn Around Time Required				QC Requirements (Specify)			
<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input checked="" type="checkbox"/> 21 Days	Other _____		
1. Relinquished By <u>William M. Gray</u>						4. Received By <u>Wm Underwood</u>	Time <u>9:30</u>
						2. Received By	Time
2. Relinquished By						3. Received By	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample: PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-35162-1

Login Number: 35162

List Source: TestAmerica Denver

List Number: 1

Creator: Underwood, Tim

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-35162-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2013

Reilly\280-35162-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for two aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-35162-1 in a single data package. The following samples were reported:

E7-102512	E7D-102512	E7FB-102512
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Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Perylene were rejected (R) in all samples.
- Results for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Anthracene, Naphthalene and Pyrene in E7-102512 and E7D-102512 and results for 1-Methylnaphthalene and 2-Methylnaphthalene and Naphthalene in E7FB-102512 were qualified as not detected (U) at the reporting limit.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenzo[a,h]anthracene and Indeno[1,2,3-cd]pyrene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects.
- Result for Carbazole in E7-102512 were qualified as not detected (U) at the analyte-specific RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatile data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of October 25, 2012. The samples were received by the laboratory on October 26, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (3.0°C to 3.4°C; criteria 4.0°C \pm 2.0°C). All samples were extracted on November 1, 2012 which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on November 13 and 14, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided. See Section XII Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on November 13, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a

national standard, when commercially available.” No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. 1-Methylnaphthalene (3.69 ng/L), 2-Methylnaphthalene (3.87 ng/L), Acenaphthene (1.85 ng/L), Acenaphthylene (1.81 ng/L), Anthracene (1.12 ng/L), Dibenzofuran (2.48 ng/L), Fluoranthene (2.71 ng/L), Fluorene (1.33 ng/L), Naphthalene (3.11 ng/L) and Pyrene (2.04 ng/L) were detected in the method blank. Results for these analytes in E7-102512, E7D-102512 and E7FB-102512 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.

After qualification based on the method blank, Benzo [a]anthracene (1.8 ng/L), Benzo[k]fluoranthene (1.6 ng/L), Benzo[g,h,i]perylene (1.8 ng/L), Dibenz [a,h]anthracene (1.4 ng/L) and Indeno[1,2,3,c,d]pyrene (1.4 ng/L) were detected in the field blank. Results for these analytes in the field samples were sufficiently high that the amount detected in the field blank would have no impact on the reported results.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample E7-102512. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Benzo[a]pyrene	19	14		30-150 (25)	L/UJ
Benzo[e]pyrene	19	14		37-105 (25)	L/UJ
Benzo[b]fluoranthene	23	19		30-150 (25)	L/UJ
Benzo[k]fluoranthene	19	17		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	6		30-150 (25)	L/R
Dibenz[a,h]anthracene	5	6		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	5	6		30-150 (25)	L/R
Perylene	19	15		30-150 (25)	R

*based on amount recovered.

Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene and Benzo[k]fluoranthene in all field samples were qualified as estimated low (L, UJ) and results for Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, and Indeno[1,2,3-cd]pyrene in were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery. Results for Perylene were subsequently rejected due to unacceptable LCS recovery, and the 'R' qualifier takes precedence.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of Perylene, which was reported as not detected. Results for Perylene in E7-102512, E7D-102512 and E7FB-102512 were qualified as rejected (R) due to unacceptable LCS recovery (0%).

VII. Field Duplicate

Sample E7D-102512 was collected as a field duplicate of sample E7-102512. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate pairs. Carbazole was detected in E7-102512 but was not reported in the paired sample. The result for Carbazole in E7D-102512 was qualified as not detected (U) at the analyte-specific RL on this basis.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goal with the exception of Quinoline with the project RL goal at 5 ng/L and the MDL at 5.8 ng/L.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- Response factors (RF) for the 10 ng/L and 20 ng/L standards in the IC could not be reproduced. This did not affect the final sample results.
- The Form 1 for the LCS incorrectly reported a % recovery for Perylene (4%).
- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument.
- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park

project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

At the discretion of the data user, the laboratory may be requested to revise the data package, addressing these documentation issues, in order to ensure that complete and accurate information is available for any future distributions of the data package. Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Perylene were rejected (R) in all samples due to unacceptable LCS recovery.
- Results for 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Anthracene, Naphthalene and Pyrene in E7-102512 and E7D-102512 and results for 1-Methylnaphthalene and 2-Methylnaphthalene and Naphthalene in E7FB-102512 were qualified as not detected (U) at the reporting limit due to sample concentrations detected within five-times the concentration found in the method blank.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene and Benzo[k]fluoranthene were qualified as estimated (L, UJ) and results for Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, and Indeno[1,2,3-cd]pyrene in all field samples were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery.
- The Result for Carbazole in E7-102512 was qualified as not detected (U) at the analyte-specific RL because Carbazole was detected in E7-102512 but not detected in the duplicate sample.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semi-volatile data.

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATILES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: October 25, 2012

Job No. 280-35162-1

ddms Project No. 2006-0022

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-35162-1

Client Sample ID: E7-102512

Lab Sample ID: 280-35162-1

Date Sampled: 10/25/2012 1330

Client Matrix: Water

Date Received: 10/26/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-147248	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-145276	Lab File ID:	G5_8202.D
Dilution:	1.0			Initial Weight/Volume:	3903.2 mL
Analysis Date:	11/13/2012 2249			Final Weight/Volume:	1000 uL
Prep Date:	11/01/2012 1345			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.5
2,3-Dihydroindene	3.2	J	0.72	5.1
1-Methylnaphthalene	1.1 U	JB	0.91	5.7
2-Methylnaphthalene	1.4 U	JB	1.0	6.0
Acenaphthene	7.8 U	B	0.51	5.8
Acenaphthylene	ND		0.79	4.9
Acridine	ND		6.7	6.7
Anthracene	1.4 U	JB	0.82	4.3
Benzo[a]anthracene	ND		0.94	4.4
Benzo[a]pyrene	ND UJ		1.3	2.6
Benzo[e]pyrene	ND UJ		1.2	4.4
Benzo[b]fluoranthene	ND UJ		1.4	4.8
Benzo(b)thiophene	3.3	J	0.77	5.3
Benzo[k]fluoranthene	ND UJ		1.3	4.2
Benzo[g,h,i]perylene	ND R		1.2	6.4
Carbazole	0.88 U	J	0.74	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	ND R		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	5.8		3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	ND R		1.3	5.5
Naphthalene	3.7 U	JB	1.2	8.8
Perylene	ND R	J	3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	1.7 U	JB	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	84		23 - 84	
Chrysene-d12 (Surr)	54		28 - 101	
Naphthalene-d8 (Surr)	81		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-35162-1

Client Sample ID: E7D-102512

Lab Sample ID: 280-35162-2FD

Date Sampled: 10/25/2012 1330

Client Matrix: Water

Date Received: 10/26/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-147248	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-145276	Lab File ID:	G5_8205.D
Dilution:	1.0			Initial Weight/Volume:	3725.3 mL
Analysis Date:	11/14/2012 0045			Final Weight/Volume:	1000 uL
Prep Date:	11/01/2012 1345			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	3.2	J	0.75	5.4
1-Methylnaphthalene	1.2 U	J-B	0.96	6.0
2-Methylnaphthalene	1.5 U	J-B	1.1	6.3
Acenaphthene	1.8 U	B	0.54	6.1
Acenaphthylene	ND		0.83	5.2
Acridine	ND		7.0	7.0
Anthracene	1.4 U	J-B	0.86	4.5
Benzo[a]anthracene	ND		0.99	4.6
Benzo[a]pyrene	ND UJ		1.3	2.7
Benzo[e]pyrene	ND UJ		1.2	4.6
Benzo[b]fluoranthene	ND UJ		1.5	5.0
Benzo(b)thiophene	3.1	J	0.81	5.6
Benzo[k]fluoranthene	ND UJ		1.3	4.4
Benzo[g,h,i]perylene	ND R		1.3	6.7
Carbazole	ND		0.77	4.1
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	ND R		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.91	4.4
Indene	5.4		3.5	5.0
Indole	ND		1.9	5.0
Indeno[1,2,3-cd]pyrene	ND R		1.4	5.8
Naphthalene	4.5 U	J-B	1.2	9.2
Perylene	ND R	J	4.1	4.1
Phenanthrene	ND		3.4	6.8
Pyrene	4.6 U	J-B	1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	78		23 - 84	
Chrysene-d12 (Surr)	64		28 - 101	
Naphthalene-d8 (Surr)	79		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-35162-1

Client Sample ID: E7FB-102512

Lab Sample ID: 280-35162-3FB

Date Sampled: 10/25/2012 1330

Client Matrix: Water

Date Received: 10/26/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-147248	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-145276	Lab File ID:	G5_8206.D
Dilution:	1.0			Initial Weight/Volume:	3824.4 mL
Analysis Date:	11/14/2012 0124			Final Weight/Volume:	1000 uL
Prep Date:	11/01/2012 1345			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.6
2,3-Dihydroindene	ND		0.73	5.2
1-Methylnaphthalene	4.5 U	JB	0.93	5.9
2-Methylnaphthalene	2.0 U	JB	1.0	6.2
Acenaphthene	ND		0.52	6.0
Acenaphthylene	ND		0.81	5.0
Acridine	ND		6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	1.8	J	0.96	4.5
Benzo[a]pyrene	ND UJ		1.3	2.6
Benzo[e]pyrene	ND UJ		1.2	4.5
Benzo[b]fluoranthene	ND UJ		1.5	4.9
Benzo(b)thiophene	ND		0.78	5.4
Benzo[k]fluoranthene	1.6 L	J	1.3	4.3
Benzo[g,h,i]perylene	1.8 L	J	1.2	6.5
Carbazole	ND		0.75	4.0
Chrysene	2.5	J	1.3	5.9
Dibenz(a,h)anthracene	1.4 L	J	1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	1.4 L	J	1.3	5.6
Naphthalene	4.3 U	JB	1.2	9.0
Perylene	ND R		4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	ND		1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	70		23 - 84
Chrysene-d12 (Surr)	98		28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

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2/26/13

ANALYTICAL REPORT

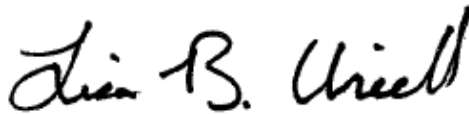
Job Number: 280-36732-1

Job Description: CSLP - Reilly Tar & Chemical

For:

Summit Envirosolutions Inc
1217 Bandana Blvd North
Saint Paul, MN 55108

Attention: William M Gregg



Approved for release.
Lisa B Uriell
Project Manager II
1/16/2013 3:03 PM

Lisa B Uriell
Project Manager II
lisa.uriell@testamericainc.com
01/16/2013
Revision: 1

cc: Scott Anderson
Peter Bell
John Laumann

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.

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CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-36732-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

Four samples, one field duplicate and one field blank were received under chain of custody on December 7, 2012. The samples were received at temperatures of 3.2°C, 3.4°C, 3.2°C and 2.8°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM

All sample holding times were met.

The following samples exhibited surrogate recoveries outside the QC control limits, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

SLP10T-120612 (280-36732-1) recovered Chrysene-d12 at 15% (limits 28-101%)
SLP10TD-120612 (280-36732-2) recovered Chrysene-d12 at 16% (limits 28-101%)
SLP6-120612 (280-36732-4) recovered Chrysene-d12 at 13% (limits 28-101%)
W119-120612 (280-36732-5) recovered Chrysene-d12 at 25% (limits 28-101%)

Low levels of Benzo[a]anthracene, Benzo[g,h,i]perylene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno[1,2,3-cd]pyrene and Pyrene are present in the method blank associated with prep batch 280-151568. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Chrysene were recovered above the reporting limits in the method blank associated with prep batch 280-151568. This is an indicator that the data may be biased high. As no detectable concentrations of Benzo[b]fluoranthene, Benzo[k]fluoranthene and Chrysene were present in the associated samples, corrective action is deemed unnecessary.

The LCS associated with prep batch 280-151568 exhibited percent recoveries outside the QC control limits for 3-Methylcholanthrene at 29% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 19% (limits 30-150%). 3-Methylcholanthrene and 7,12-Dimethylbenz(a)anthracene are not compounds of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is.

The MS/MSD associated with prep batch 280-151568 was performed using sample SLP10T-120612 (280-36732-1), as requested. MS/MSD exhibited 13 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 11 of the 33 Matrix Spike Duplicate compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylcholanthrene

Acridine

Benzo[a]anthracene

Benzo[a]pyrene
Benzo[k]fluoranthene
Dibenzo(a,h)anthracene
Perylene

Benzo[e]pyrene
Benzo[ghi]perylene
Indeno[1,2,3-cd]pyrene
Chrysene-d12

Benzo[b]fluoranthene
Chrysene
7,12-Dimethylbenz(a)anthracene

No other anomalies were noted.

Revision 1 - January 16, 2013

This report has been revised to include the ICAL raw data as this information was inadvertently omitted in the original submission.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION		
JOB: 280-36732-1		
ANALYSIS: SW846-8270C SIM		
QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	28
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	5
MS Surrogates	3	2
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	18	14
Samples and QC Internal Standard Area	30	30
TOTAL	181	168
% Completeness	92.8%	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-36732-1					
Sample: SLP10T-120612		DUP: SLP10TD-120612			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	1.2	Acenaphthene	ND	NC	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	0.76	2,3-Dihydroindene	ND	NC	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	2.5	Naphthalene	1.3	63.2	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference

ND = Compound not detected in the sample

p = RPD is outside of control limits

*NC = RPD not calculated, one positive result and one ND.

Considered acceptable if the positive result is less than 4x the RL.

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Instrument ID: SMS_G5 Analysis Batch Number: 153241Lab Sample ID: STD0010 280-153241/2 IC Client Sample ID: _____Date Analyzed: 12/20/12 15:49 Lab File ID: G5_8720.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Baseline	vasquezk	12/20/12 16:25

Lab Sample ID: STD0020 280-153241/3 IC Client Sample ID: _____Date Analyzed: 12/20/12 16:30 Lab File ID: G5_8721.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:52

Lab Sample ID: STD0150 280-153241/4 IC Client Sample ID: _____Date Analyzed: 12/20/12 17:06 Lab File ID: G5_8722.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:53

Lab Sample ID: ICIS 280-153241/5 Client Sample ID: _____Date Analyzed: 12/20/12 17:41 Lab File ID: G5_8723.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:54

Lab Sample ID: STD0600 280-153241/6 IC Client Sample ID: _____Date Analyzed: 12/20/12 18:17 Lab File ID: G5_8724.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:54

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Instrument ID: SMS_G5 Analysis Batch Number: 153241Lab Sample ID: STD0800 280-153241/7 IC Client Sample ID: _____Date Analyzed: 12/20/12 18:52 Lab File ID: G5_8725.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:55

Lab Sample ID: STD1200 280-153241/8 IC Client Sample ID: _____Date Analyzed: 12/20/12 19:28 Lab File ID: G5_8726.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:56

Lab Sample ID: ICV 280-153241/9 Client Sample ID: _____Date Analyzed: 12/20/12 20:03 Lab File ID: G5_8727.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Anthracene	11.95	Peak Tail	vasquezk	12/24/12 06:56

Lab Sample ID: 280-36732-1 MS Client Sample ID: SLP10T-120612 MSDate Analyzed: 12/20/12 23:37 Lab File ID: G5_8733.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 07:10

Lab Sample ID: 280-36732-1 MSD Client Sample ID: SLP10T-120612 MSDDate Analyzed: 12/21/12 00:12 Lab File ID: G5_8734.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 07:11

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Instrument ID: SMS_G5 Analysis Batch Number: 153241Lab Sample ID: 280-36732-4 Client Sample ID: SLP6-120612Date Analyzed: 12/21/12 01:59 Lab File ID: G5_8737.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Peak Tail	vasquezk	12/24/12 07:12

Lab Sample ID: 280-36732-5 Client Sample ID: W119-120612Date Analyzed: 12/21/12 02:35 Lab File ID: G5_8738.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Baseline	vasquezk	12/24/12 07:41

Lab Sample ID: 280-36732-6 Client Sample ID: W48-120612Date Analyzed: 12/21/12 03:11 Lab File ID: G5_8739.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Baseline	vasquezk	12/24/12 07:42

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Instrument ID: SMS_G5 Analysis Batch Number: 153241

Lab Sample ID: ICIS 280-153241/5 Client Sample ID: _____

Date Analyzed: 12/20/12 17:41 Lab File ID: G5_8723.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 06:54

Lab Sample ID: ICV 280-153241/9 Client Sample ID: _____

Date Analyzed: 12/20/12 20:03 Lab File ID: G5_8727.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Anthracene	11.95	Peak Tail	vasquezk	12/24/12 06:56

Lab Sample ID: 280-36732-1 MS Client Sample ID: SLP10T-120612 MS

Date Analyzed: 12/20/12 23:37 Lab File ID: G5_8733.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 07:10

Lab Sample ID: 280-36732-1 MSD Client Sample ID: SLP10T-120612 MSD

Date Analyzed: 12/21/12 00:12 Lab File ID: G5_8734.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.02	Peak Tail	vasquezk	12/24/12 07:11

Lab Sample ID: 280-36732-4 Client Sample ID: SLP6-120612

Date Analyzed: 12/21/12 01:59 Lab File ID: G5_8737.D GC Column: Vf-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Peak Tail	vasquezk	12/24/12 07:12

28122812

8270C SIM

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.:
Instrument ID: SMS_G5 Analysis Batch Number: 153241
Lab Sample ID: 280-36732-5 Client Sample ID: W119-120612
Date Analyzed: 12/21/12 02:35 Lab File ID: G5_8738.D GC Column: VF-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Baseline	vasquezk	12/24/12 07:41

Lab Sample ID: 280-36732-6 Client Sample ID: W48-120612
Date Analyzed: 12/21/12 03:11 Lab File ID: G5_8739.D GC Column: VF-5MS ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acridine	12.01	Baseline	vasquezk	12/24/12 07:42

\$122812

SAMPLE SUMMARY

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-36732-1	SLP10T-120612	Water	12/06/2012 0850	12/07/2012 0930
280-36732-1MS	SLP10T-120612	Water	12/06/2012 0850	12/07/2012 0930
280-36732-1MSD	SLP10T-120612	Water	12/06/2012 0850	12/07/2012 0930
280-36732-2FD	SLP10TD-120612	Water	12/06/2012 0850	12/07/2012 0930
280-36732-3FB	SLP10TFB-120612	Water	12/06/2012 0850	12/07/2012 0930
280-36732-4	SLP6-120612	Water	12/06/2012 1200	12/07/2012 0930
280-36732-5	W119-120612	Water	12/06/2012 0810	12/07/2012 0930
280-36732-6	W48-120612	Water	12/06/2012 1100	12/07/2012 0930

EXECUTIVE SUMMARY - Detections

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-36732-1	SLP10T-120612					
2,3-Dihydroindene		0.76	J	5.4	ng/L	8270C SIM
Acenaphthene		1.2	J	6.2	ng/L	8270C SIM
Naphthalene		2.5	J	9.3	ng/L	8270C SIM
280-36732-2FD	SLP10TD-120612					
Naphthalene		1.3	J	8.9	ng/L	8270C SIM
280-36732-3FB	SLP10TFB-120612					
2-Methylnaphthalene		1.1	J	6.3	ng/L	8270C SIM
Acenaphthene		0.77	J	6.1	ng/L	8270C SIM
Naphthalene		3.0	J	9.1	ng/L	8270C SIM
280-36732-4	SLP6-120612					
2,3-Dihydroindene		41		5.3	ng/L	8270C SIM
1-Methylnaphthalene		1.3	J	6.0	ng/L	8270C SIM
Acenaphthene		56		6.1	ng/L	8270C SIM
Acenaphthylene		6.1		5.1	ng/L	8270C SIM
Anthracene		1.7	J	4.5	ng/L	8270C SIM
Benzo(b)thiophene		7.5		5.5	ng/L	8270C SIM
Carbazole		1.7	J	4.1	ng/L	8270C SIM
Dibenzothiophene		1.4	J	4.4	ng/L	8270C SIM
Fluoranthene		1.9	J B	4.9	ng/L	8270C SIM
Fluorene		0.94	J	4.4	ng/L	8270C SIM
Indene		5.3		5.0	ng/L	8270C SIM
Naphthalene		4.1	J	9.2	ng/L	8270C SIM
Pyrene		3.0	J B	4.5	ng/L	8270C SIM
280-36732-5	W119-120612					
2,3-Dihydroindene		5.0	J	5.1	ng/L	8270C SIM
1-Methylnaphthalene		1.7	J	5.7	ng/L	8270C SIM
2-Methylnaphthalene		1.4	J	6.0	ng/L	8270C SIM
Acenaphthene		39		5.8	ng/L	8270C SIM
Acenaphthylene		2.2	J	4.9	ng/L	8270C SIM
Acridine		7.6		6.6	ng/L	8270C SIM
Anthracene		3.4	J	4.3	ng/L	8270C SIM
Benzo(b)thiophene		7.2		5.3	ng/L	8270C SIM
Carbazole		1.3	J	3.9	ng/L	8270C SIM
Indene		18		4.8	ng/L	8270C SIM
Naphthalene		4.4	J	8.8	ng/L	8270C SIM
Pyrene		12	B	4.3	ng/L	8270C SIM

EXECUTIVE SUMMARY - Detections

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-36732-6	W48-120612					
2,3-Benzofuran		0.89	J	5.5	ng/L	8270C SIM
2,3-Dihydroindene		5.1		5.1	ng/L	8270C SIM
1-Methylnaphthalene		3.2	J	5.7	ng/L	8270C SIM
2-Methylnaphthalene		1.8	J	6.0	ng/L	8270C SIM
Acenaphthene		96		5.8	ng/L	8270C SIM
Acenaphthylene		4.1	J	4.9	ng/L	8270C SIM
Acridine		13		6.6	ng/L	8270C SIM
Anthracene		5.4		4.3	ng/L	8270C SIM
Benzo(b)thiophene		12		5.3	ng/L	8270C SIM
Carbazole		1.7	J	3.9	ng/L	8270C SIM
Indene		47		4.8	ng/L	8270C SIM
Indole		2.1	J	4.8	ng/L	8270C SIM
Naphthalene		5.2	J	8.7	ng/L	8270C SIM
Pyrene		3.6	J B	4.3	ng/L	8270C SIM

METHOD SUMMARY

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compound (GC/MS SIM LL)	TAL DEN	SW846 8270C SIM	
Liquid-Liquid Extraction (Continuous)	TAL DEN		SW846 3520C

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Method	Analyst	Analyst ID
SW846 8270C SIM	Vasquez, Karla G	KGV

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10T-120612

Lab Sample ID: 280-36732-1

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8732.D
Dilution:	1.0			Initial Weight/Volume:	3703.6 mL
Analysis Date:	12/20/2012 2301			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	0.76	J	0.76	5.4
1-Methylnaphthalene	ND		0.96	6.0
2-Methylnaphthalene	ND		1.1	6.4
Acenaphthene	1.2	J	0.54	6.2
Acenaphthylene	ND		0.83	5.2
Acridine	ND		7.0	7.0
Anthracene	ND		0.86	4.5
Benzo[a]anthracene	ND		0.99	4.6
Benzo[a]pyrene	ND		1.3	2.7
Benzo[e]pyrene	ND		1.2	4.6
Benzo[b]fluoranthene	ND		1.5	5.1
Benzo(b)thiophene	ND		0.81	5.6
Benzo[k]fluoranthene	ND		1.3	4.4
Benzo[g,h,i]perylene	ND		1.3	6.7
Carbazole	ND		0.78	4.1
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	ND		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	5.0
Fluorene	ND		0.92	4.4
Indene	ND		3.5	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	ND		1.4	5.8
Naphthalene	2.5	J	1.2	9.3
Perylene	ND		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	ND		1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	15	X	28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10TD-120612

Lab Sample ID: 280-36732-2FD

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8735.D
Dilution:	1.0			Initial Weight/Volume:	3875.1 mL
Analysis Date:	12/21/2012 0048			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.6
2,3-Dihydroindene	ND		0.72	5.2
1-Methylnaphthalene	ND		0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthene	ND		0.52	5.9
Acenaphthylene	ND		0.79	5.0
Acridine	ND		6.7	6.7
Anthracene	ND		0.83	4.3
Benzo[a]anthracene	ND		0.95	4.4
Benzo[a]pyrene	ND		1.3	2.6
Benzo[e]pyrene	ND		1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.9
Benzo(b)thiophene	ND		0.77	5.4
Benzo[k]fluoranthene	ND		1.3	4.2
Benzo[g,h,i]perylene	ND		1.2	6.4
Carbazole	ND		0.74	3.9
Chrysene	ND		1.3	5.8
Dibenz(a,h)anthracene	ND		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND		1.3	5.6
Naphthalene	1.3	J	1.2	8.9
Perylene	ND		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	ND		1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	16	X	28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10TFB-120612

Lab Sample ID: 280-36732-3FB

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8736.D
Dilution:	1.0			Initial Weight/Volume:	3766.2 mL
Analysis Date:	12/21/2012 0124			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	ND		0.74	5.3
1-Methylnaphthalene	ND		0.95	5.9
2-Methylnaphthalene	1.1	J	1.0	6.3
Acenaphthene	0.77	J	0.53	6.1
Acenaphthylene	ND		0.82	5.1
Acridine	ND		6.9	6.9
Anthracene	ND		0.85	4.5
Benzo[a]anthracene	ND		0.98	4.6
Benzo[a]pyrene	ND		1.3	2.7
Benzo[e]pyrene	ND		1.2	4.6
Benzo[b]fluoranthene	ND		1.5	5.0
Benzo(b)thiophene	ND		0.80	5.5
Benzo[k]fluoranthene	ND		1.3	4.4
Benzo[g,h,i]perylene	ND		1.2	6.6
Carbazole	ND		0.76	4.0
Chrysene	ND		1.3	5.9
Dibenz(a,h)anthracene	ND		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	ND		1.0	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.90	4.4
Indene	ND		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	ND		1.3	5.7
Naphthalene	3.0	J	1.2	9.1
Perylene	ND		4.0	4.0
Phenanthrene	ND		3.4	6.7
Pyrene	ND		1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	74		23 - 84
Chrysene-d12 (Surr)	85		28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP6-120612

Lab Sample ID: 280-36732-4

Client Matrix: Water

Date Sampled: 12/06/2012 1200

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8737.D
Dilution:	1.0			Initial Weight/Volume:	3749.9 mL
Analysis Date:	12/21/2012 0159			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	41		0.75	5.3
1-Methylnaphthalene	1.3	J	0.95	6.0
2-Methylnaphthalene	ND		1.0	6.3
Acenaphthene	56		0.53	6.1
Acenaphthylene	6.1		0.82	5.1
Acridine	ND		6.9	6.9
Anthracene	1.7	J	0.85	4.5
Benzo[a]anthracene	ND		0.98	4.6
Benzo[a]pyrene	ND		1.3	2.7
Benzo[e]pyrene	ND		1.2	4.6
Benzo[b]fluoranthene	ND		1.5	5.0
Benzo(b)thiophene	7.5		0.80	5.5
Benzo[k]fluoranthene	ND		1.3	4.4
Benzo[g,h,i]perylene	ND		1.2	6.6
Carbazole	1.7	J	0.77	4.1
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	ND		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	1.4	J	1.0	4.4
Fluoranthene	1.9	J B	1.8	4.9
Fluorene	0.94	J	0.91	4.4
Indene	5.3		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	ND		1.3	5.8
Naphthalene	4.1	J	1.2	9.2
Perylene	ND		4.1	4.1
Phenanthrene	ND		3.4	6.7
Pyrene	3.0	J B	1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	58		23 - 84
Chrysene-d12 (Surr)	13	X	28 - 101
Naphthalene-d8 (Surr)	60		22 - 97

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: W119-120612

Lab Sample ID: 280-36732-5

Client Matrix: Water

Date Sampled: 12/06/2012 0810

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8738.D
Dilution:	1.0			Initial Weight/Volume:	3920.3 mL
Analysis Date:	12/21/2012 0235			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	5.0	J	0.71	5.1
1-Methylnaphthalene	1.7	J	0.91	5.7
2-Methylnaphthalene	1.4	J	1.0	6.0
Acenaphthene	39		0.51	5.8
Acenaphthylene	2.2	J	0.79	4.9
Acridine	7.6		6.6	6.6
Anthracene	3.4	J	0.82	4.3
Benzo[a]anthracene	ND		0.94	4.4
Benzo[a]pyrene	ND		1.3	2.6
Benzo[e]pyrene	ND		1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.8
Benzo(b)thiophene	7.2		0.77	5.3
Benzo[k]fluoranthene	ND		1.3	4.2
Benzo[g,h,i]perylene	ND		1.2	6.3
Carbazole	1.3	J	0.73	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	ND		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	18		3.3	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	ND		1.3	5.5
Naphthalene	4.4	J	1.2	8.8
Perylene	ND		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	12	B	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	80		23 - 84
Chrysene-d12 (Surr)	25	X	28 - 101
Naphthalene-d8 (Surr)	78		22 - 97

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: W48-120612

Lab Sample ID: 280-36732-6

Client Matrix: Water

Date Sampled: 12/06/2012 1100

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8739.D
Dilution:	1.0			Initial Weight/Volume:	3938.7 mL
Analysis Date:	12/21/2012 0311			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.89	J	0.69	5.5
2,3-Dihydroindene	5.1		0.71	5.1
1-Methylnaphthalene	3.2	J	0.90	5.7
2-Methylnaphthalene	1.8	J	1.0	6.0
Acenaphthene	96		0.51	5.8
Acenaphthylene	4.1	J	0.78	4.9
Acridine	13		6.6	6.6
Anthracene	5.4		0.81	4.3
Benzo[a]anthracene	ND		0.93	4.4
Benzo[a]pyrene	ND		1.3	2.5
Benzo[e]pyrene	ND		1.2	4.4
Benzo[b]fluoranthene	ND		1.4	4.8
Benzo(b)thiophene	12		0.76	5.3
Benzo[k]fluoranthene	ND		1.3	4.2
Benzo[g,h,i]perylene	ND		1.2	6.3
Carbazole	1.7	J	0.73	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	ND		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.86	4.2
Indene	47		3.3	4.8
Indole	2.1	J	1.8	4.8
Indeno[1,2,3-cd]pyrene	ND		1.3	5.5
Naphthalene	5.2	J	1.2	8.7
Perylene	ND		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	3.6	J B	1.0	4.3
Quinoline	ND		5.7	9.1
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	75		22 - 97

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Surrogate Recovery Report

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Client Matrix: Water

Lab Sample ID	Client Sample ID	NTH %Rec	FLR %Rec	CRY %Rec
280-36732-1	SLP10T-120612	88	84	15X
280-36732-2	SLP10TD-120612	89	83	16X
280-36732-3	SLP10TFB-120612	79	74	85
280-36732-4	SLP6-120612	60	58	13X
280-36732-5	W119-120612	78	80	25X
280-36732-6	W48-120612	75	83	43
MB 280-151568/1-A		77	67	80
LCS 280-151568/2-A		63	57	69
280-36732-1 MS	SLP10T-120612 MS	82	80	18X
280-36732-1 MSD	SLP10T-120612 MSD	80	78	23X

Surrogate	Acceptance Limits
NTH = Naphthalene-d8 (Surr)	22-97
FLR = Fluorene-d10 (Surr)	23-84
CRY = Chrysene-d12 (Surr)	28-101

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Method Blank - Batch: 280-151568

Method: 8270C SIM Preparation: 3520C

Lab Sample ID: MB 280-151568/1-A
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/20/2012 2039
Prep Date: 12/11/2012 1350
Leach Date: N/A

Analysis Batch: 280-153241
Prep Batch: 280-151568
Leach Batch: N/A
Units: ng/L

Instrument ID: SMS_G5
Lab File ID: G5_8728.D
Initial Weight/Volume: 4000 mL
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL

Analyte	Result	Qual	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	ND		0.70	5.0
1-Methylnaphthalene	ND		0.89	5.6
2-Methylnaphthalene	ND		0.98	5.9
Acenaphthene	ND		0.50	5.7
Acenaphthylene	ND		0.77	4.8
Acridine	ND		6.5	6.5
Anthracene	ND		0.80	4.2
Benzo[a]anthracene	3.43	J	0.92	4.3
Benzo[a]pyrene	ND		1.2	2.5
Benzo[e]pyrene	ND		1.1	4.3
Benzo[b]fluoranthene	5.62		1.4	4.7
Benzo(b)thiophene	ND		0.75	5.2
Benzo[k]fluoranthene	4.92		1.2	4.1
Benzo[g,h,i]perylene	3.90	J	1.2	6.2
Carbazole	ND		0.72	3.8
Chrysene	6.16		1.2	5.6
Dibenz(a,h)anthracene	4.05	J	1.0	5.9
Dibenzofuran	ND		0.99	5.7
Dibenzothiophene	ND		0.98	4.1
Fluoranthene	3.76	J	1.7	4.6
Fluorene	ND		0.85	4.1
Indene	ND		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	4.73	J	1.3	5.4
Naphthalene	ND		1.1	8.6
Perylene	ND		3.8	3.8
Phenanthrene	ND		3.2	6.3
Pyrene	2.32	J	0.99	4.2
Quinoline	ND		5.7	9.0
Biphenyl	ND		1.1	5.6

Surrogate	% Rec	Acceptance Limits
Fluorene-d10 (Surr)	67	23 - 84
Chrysene-d12 (Surr)	80	28 - 101
Naphthalene-d8 (Surr)	77	22 - 97

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Lab Control Sample - Batch: 280-151568

Method: 8270C SIM

Preparation: 3520C

Lab Sample ID: LCS 280-151568/2-A
 Client Matrix: Water
 Dilution: 1.0
 Analysis Date: 12/20/2012 2114
 Prep Date: 12/11/2012 1350
 Leach Date: N/A

Analysis Batch: 280-153241
 Prep Batch: 280-151568
 Leach Batch: N/A
 Units: ng/L

Instrument ID: SMS_G5
 Lab File ID: G5_8729.D
 Initial Weight/Volume: 4000 mL
 Final Weight/Volume: 1000 uL
 Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,3-Benzofuran	75.0	46.4	62	30 - 150	
2,3-Dihydroindene	75.0	44.4	59	30 - 150	
1-Methylnaphthalene	75.0	45.9	61	30 - 150	
2-Methylnaphthalene	75.0	45.6	61	25 - 95	
3-Methylcholanthrene	75.0	21.5	29	30 - 150	*
Acenaphthene	75.0	45.8	61	30 - 150	
Acenaphthylene	75.0	38.1	51	30 - 150	
Acridine	75.0	35.8	48	30 - 150	
Anthracene	75.0	42.6	57	30 - 150	
Benzo[a]anthracene	75.0	46.3	62	30 - 150	
Benzo[a]pyrene	75.0	37.1	49	30 - 150	
Benzo[e]pyrene	75.0	50.2	67	37 - 105	
Benzo[b]fluoranthene	75.0	45.6	61	30 - 150	
Benzo(b)thiophene	75.0	45.9	61	30 - 150	
Benzo[k]fluoranthene	75.0	47.9	64	30 - 150	
Benzo[g,h,i]perylene	75.0	38.1	51	30 - 150	
Carbazole	75.0	44.0	59	30 - 150	
Chrysene	75.0	53.1	71	20 - 136	
Dibenz(a,h)anthracene	75.0	44.1	59	30 - 150	
Dibenzofuran	75.0	47.2	63	30 - 150	
Dibenzothiophene	75.0	47.5	63	30 - 150	
Fluoranthene	75.0	47.6	63	30 - 150	
Fluorene	75.0	45.0	60	34 - 96	
Indene	75.0	44.6	59	22 - 86	
Indole	75.0	32.6	43	30 - 150	
Indeno[1,2,3-cd]pyrene	75.0	42.2	56	30 - 150	
Naphthalene	75.0	47.4	63	27 - 95	
Perylene	75.0	22.8	30	30 - 150	
Phenanthrene	75.0	49.3	66	30 - 150	
Pyrene	75.0	47.1	63	30 - 150	
Quinoline	75.0	40.9	55	20 - 112	
7,12-Dimethylbenz(a)anthracene	75.0	14.0	19	30 - 150	*
Biphenyl	75.0	46.6	62	30 - 150	
Surrogate	% Rec		Acceptance Limits		
Fluorene-d10 (Surr)	57		23 - 84		
Chrysene-d12 (Surr)	69		28 - 101		
Naphthalene-d8 (Surr)	63		22 - 97		

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 280-151568

Method: 8270C SIM
Preparation: 3520C

MS Lab Sample ID:	280-36732-1	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Client Matrix:	Water	Prep Batch:	280-151568	Lab File ID:	G5_8733.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	3741.8 mL
Analysis Date:	12/20/2012 2337			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-36732-1	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Client Matrix:	Water	Prep Batch:	280-151568	Lab File ID:	G5_8734.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	3739.1 mL
Analysis Date:	12/21/2012 0012			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
2,3-Benzofuran	79	77	30 - 150	2	50		
2,3-Dihydroindene	75	72	30 - 150	3	50		
1-Methylnaphthalene	82	79	30 - 150	3	50		
2-Methylnaphthalene	81	79	25 - 95	2	50		
3-Methylcholanthrene	0	0	30 - 150	NC	50	F	F
Acenaphthene	82	80	30 - 150	3	50		
Acenaphthylene	74	72	30 - 150	3	50		
Acridine	14	22	30 - 150	41	50	F	F
Anthracene	74	76	30 - 150	2	50		
Benzo[a]anthracene	13	17	30 - 150	31	50	F	F
Benzo[a]pyrene	3	4	30 - 150	22	50	J F	F
Benzo[e]pyrene	4	5	37 - 105	12	50	J F	J F
Benzo[b]fluoranthene	6	7	30 - 150	20	50	J F	F
Benzo(b)thiophene	79	79	30 - 150	0	50		
Benzo[k]fluoranthene	5	6	30 - 150	12	50	J F	F
Benzo[g,h,i]perylene	4	3	30 - 150	26	50	J F	J F
Carbazole	77	82	30 - 150	5	50		
Chrysene	17	24	20 - 136	34	50	F	
Dibenz(a,h)anthracene	3	2	30 - 150	23	50	J F	J F
Dibenzofuran	85	83	30 - 150	3	50		
Dibenzothiophene	85	85	30 - 150	0	50		
Fluoranthene	54	65	30 - 150	18	50		
Fluorene	83	81	34 - 96	2	50		
Indene	76	74	22 - 86	3	50		
Indole	67	71	30 - 150	6	50		
Indeno[1,2,3-cd]pyrene	3	3	30 - 150	21	50	J F	J F
Naphthalene	80	79	27 - 95	2	50		
Perylene	0	0	30 - 150	NC	50	F	F
Phenanthrene	86	87	30 - 150	2	50		
Pyrene	53	64	30 - 150	19	50		
Quinoline	48	60	20 - 112	21	50		
7,12-Dimethylbenz(a)anthracene	24	40	30 - 150	49	50	F	
Biphenyl	83	81	30 - 150	3	50		

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Fluorene-d10 (Surr)	80	78	23 - 84
Chrysene-d12 (Surr)	18 X	23 X	28 - 101
Naphthalene-d8 (Surr)	82	80	22 - 97

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-151568**

**Method: 8270C SIM
Preparation: 3520C**

MS Lab Sample ID: 280-36732-1 Units: ng/L
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/20/2012 2337
Prep Date: 12/11/2012 1350
Leach Date: N/A

MSD Lab Sample ID: 280-36732-1
Client Matrix: Water
Dilution: 1.0
Analysis Date: 12/21/2012 0012
Prep Date: 12/11/2012 1350
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
2,3-Benzofuran	ND	80.2	80.2	63.4	61.9
2,3-Dihydroindene	0.76 J	80.2	80.2	60.6	58.9
1-Methylnaphthalene	ND	80.2	80.2	65.4	63.6
2-Methylnaphthalene	ND	80.2	80.2	64.7	63.2
3-Methylcholanthrene	ND	80.2	80.2	ND F	ND F
Acenaphthene	1.2 J	80.2	80.2	66.8	65.0
Acenaphthylene	ND	80.2	80.2	59.7	57.7
Acridine	ND	80.2	80.2	11.6 F	17.6 F
Anthracene	ND	80.2	80.2	59.7	60.6
Benzo[a]anthracene	ND	80.2	80.2	10.2 F	13.8 F
Benzo[a]pyrene	ND	80.2	80.2	2.49 J F	3.10 F
Benzo[e]pyrene	ND	80.2	80.2	3.39 J F	3.82 J F
Benzo[b]fluoranthene	ND	80.2	80.2	4.63 J F	5.67 F
Benzo(b)thiophene	ND	80.2	80.2	63.2	63.0
Benzo[k]fluoranthene	ND	80.2	80.2	4.24 J F	4.80 F
Benzo[g,h,i]perylene	ND	80.2	80.2	2.84 J F	2.19 J F
Carbazole	ND	80.2	80.2	62.0	65.4
Chrysene	ND	80.2	80.2	13.6 F	19.1
Dibenz(a,h)anthracene	ND	80.2	80.2	2.30 J F	1.82 J F
Dibenzofuran	ND	80.2	80.2	68.3	66.5
Dibenzothiophene	ND	80.2	80.2	68.1	67.8
Fluoranthene	ND	80.2	80.2	43.7	52.3
Fluorene	ND	80.2	80.2	66.4	65.1
Indene	ND	80.2	80.2	61.3	59.3
Indole	ND	80.2	80.2	53.6	57.0
Indeno[1,2,3-cd]pyrene	ND	80.2	80.2	2.53 J F	2.05 J F
Naphthalene	2.5 J	80.2	80.2	66.8	65.6
Perylene	ND	80.2	80.2	ND F	ND F
Phenanthrene	ND	80.2	80.2	68.6	69.8
Pyrene	ND	80.2	80.2	42.5	51.5
Quinoline	ND	80.2	80.2	38.9	48.2
7,12-Dimethylbenz(a)anthracene	ND	80.2	80.2	19.3 F	31.8
Biphenyl	ND	80.2	80.2	66.7	64.9

DATA REPORTING QUALIFIERS

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Lab Section	Qualifier	Description
GC/MS Semi VOA	B	Compound was found in the blank and sample.
	*	LCS or LCSD exceeds the control limits
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 280-151568					
LCS 280-151568/2-A	Lab Control Sample	T	Water	3520C	
MB 280-151568/1-A	Method Blank	T	Water	3520C	
280-36732-1	SLP10T-120612	T	Water	3520C	
280-36732-1MS	Matrix Spike	T	Water	3520C	
280-36732-1MSD	Matrix Spike Duplicate	T	Water	3520C	
280-36732-2FD	SLP10TD-120612	T	Water	3520C	
280-36732-3FB	SLP10TFB-120612	T	Water	3520C	
280-36732-4	SLP6-120612	T	Water	3520C	
280-36732-5	W119-120612	T	Water	3520C	
280-36732-6	W48-120612	T	Water	3520C	
Analysis Batch:280-153241					
LCS 280-151568/2-A	Lab Control Sample	T	Water	8270C SIM	280-151568
MB 280-151568/1-A	Method Blank	T	Water	8270C SIM	280-151568
280-36732-1	SLP10T-120612	T	Water	8270C SIM	280-151568
280-36732-1MS	Matrix Spike	T	Water	8270C SIM	280-151568
280-36732-1MSD	Matrix Spike Duplicate	T	Water	8270C SIM	280-151568
280-36732-2FD	SLP10TD-120612	T	Water	8270C SIM	280-151568
280-36732-3FB	SLP10TFB-120612	T	Water	8270C SIM	280-151568
280-36732-4	SLP6-120612	T	Water	8270C SIM	280-151568
280-36732-5	W119-120612	T	Water	8270C SIM	280-151568
280-36732-6	W48-120612	T	Water	8270C SIM	280-151568

Report Basis

T = Total

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Laboratory Chronicle

Lab ID: 280-36732-1

Client ID: SLP10T-120612

Sample Date/Time: 12/06/2012 08:50

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-J-1-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-J-1-A		280-153241	280-151568	12/20/2012 23:01	1	TAL DEN	KGV

Lab ID: 280-36732-1

Client ID: SLP10T-120612

Sample Date/Time: 12/06/2012 08:50

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-M-1-A MS		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-M-1-A MS		280-153241	280-151568	12/20/2012 23:37	1	TAL DEN	KGV

Lab ID: 280-36732-1

Client ID: SLP10T-120612

Sample Date/Time: 12/06/2012 08:50

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-P-1-A MSD		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-P-1-A MSD		280-153241	280-151568	12/21/2012 00:12	1	TAL DEN	KGV

Lab ID: 280-36732-2

Client ID: SLP10TD-120612

Sample Date/Time: 12/06/2012 08:50

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-B-2-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-B-2-A		280-153241	280-151568	12/21/2012 00:48	1	TAL DEN	KGV

Lab ID: 280-36732-3

Client ID: SLP10TFB-120612

Sample Date/Time: 12/06/2012 08:50

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-E-3-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-E-3-A		280-153241	280-151568	12/21/2012 01:24	1	TAL DEN	KGV

Lab ID: 280-36732-4

Client ID: SLP6-120612

Sample Date/Time: 12/06/2012 12:00

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-E-4-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-E-4-A		280-153241	280-151568	12/21/2012 01:59	1	TAL DEN	KGV

Quality Control Results

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Laboratory Chronicle

Lab ID: 280-36732-5

Client ID: W119-120612

Sample Date/Time: 12/06/2012 08:10

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-B-5-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-B-5-A		280-153241	280-151568	12/21/2012 02:35	1	TAL DEN	KGV

Lab ID: 280-36732-6

Client ID: W48-120612

Sample Date/Time: 12/06/2012 11:00

Received Date/Time: 12/07/2012 09:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	280-36732-D-6-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	280-36732-D-6-A		280-153241	280-151568	12/21/2012 03:11	1	TAL DEN	KGV

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	MB 280-151568/1-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	MB 280-151568/1-A		280-153241	280-151568	12/20/2012 20:39	1	TAL DEN	KGV

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3520C	LCS 280-151568/2-A		280-153241	280-151568	12/11/2012 13:50	1	TAL DEN	JJW
A:8270C SIM	LCS 280-151568/2-A		280-153241	280-151568	12/20/2012 21:14	1	TAL DEN	KGV

Lab References:

TAL DEN = TestAmerica Denver

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
CSLP_SIM_LCS_00004	03/14/13	03/30/12	P&T Methanol, Lot MethonalP&T_00019	100 mL	CSLP_FS_LCS_00005	0.6 mL	1-Methylnaphthalene	0.3 ug/mL
							2-Methylnaphthalene	0.3 ug/mL
							Acenaphthene	0.3 ug/mL
							Acenaphthylene	0.3 ug/mL
							Anthracene	0.3 ug/mL
							Benzo[a]anthracene	0.3 ug/mL
							Benzo[a]pyrene	0.3 ug/mL
							Benzo[b]fluoranthene	0.3 ug/mL
							Benzo[g,h,i]perylene	0.3 ug/mL
							Benzo[k]fluoranthene	0.3 ug/mL
							Chrysene	0.3 ug/mL
							Dibenz(a,h)anthracene	0.3 ug/mL
							Fluoranthene	0.3 ug/mL
							Fluorene	0.3 ug/mL
							Indeno[1,2,3-cd]pyrene	0.3 ug/mL
							Naphthalene	0.3 ug/mL
							Phenanthrene	0.3 ug/mL
							Pyrene	0.3 ug/mL
							2,3,5-Trimethylnaphthalene	0.3 ug/mL
							2,3-Benzofuran	0.3 ug/mL
							2,3-Dihydroindene	0.3 ug/mL
							2,6-Dimethylnaphthalene	0.3 ug/mL
							3-Methylcholanthrene	0.3 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.3 ug/mL
							Acridine	0.3 ug/mL
							Benzo(b)thiophene	0.3 ug/mL
							Benzo[e]pyrene	0.3 ug/mL
							Biphenyl	0.3 ug/mL
							Carbazole	0.3 ug/mL
							Di-n-octyl phthalate	0.3 ug/mL
							Dibenz[a,h]acridine	0.3 ug/mL
							Dibenz[a,j]acridine	0.3 ug/mL
							Dibenzofuran	0.3 ug/mL
							Dibenzothiophene	0.3 ug/mL
							Indene	0.3 ug/mL
							Indole	0.3 ug/mL
							Perylene	0.3 ug/mL
							Quinoline	0.3 ug/mL
							1,2:7,8-Dibenzpyrene	0.3 ug/mL
							1-Methylphenanthrene	0.3 ug/mL
							6-Methylchrysene	0.3 ug/mL
							7H-Dibenzo[c,g]carbazole	0.3 ug/mL
							Dibenzo(def,p)chrysene	0.3 ug/mL
							Dibenzo[a,e]pyrene	0.3 ug/mL
							Dibenzo[a,h]pyrene	0.3 ug/mL
.CSLP_FS_LCS_00005	03/14/13	03/23/12	P&T Methanol, Lot MethanolP&T_00017	50 mL	CSLP-LCS-Stk1_00018	1.15 mL	1-Methylnaphthalene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	50 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Anthracene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Chrysene	50 ug/mL
							Dibenz(a,h)anthracene	50 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Naphthalene	50 ug/mL
							Phenanthrene	50 ug/mL
							Pyrene	50 ug/mL
					CSLP-LCS-Stk1_00019	0.1 mL	1-Methylnaphthalene	50 ug/mL
							2-Methylnaphthalene	50 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Anthracene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Chrysene	50 ug/mL
							Dibenz(a,h)anthracene	50 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Naphthalene	50 ug/mL
							Phenanthrene	50 ug/mL
							Pyrene	50 ug/mL
					CSLP-LCS-Stk2_00025	1.15 mL	2,3,5-Trimethylnaphthalene	50 ug/mL
							2,3-Benzofuran	50 ug/mL
							2,3-Dihydroindene	50 ug/mL
							2,6-Dimethylnaphthalene	50 ug/mL
							3-Methylcholanthrene	50 ug/mL
							7,12-Dimethylbenz(a)anthracene	50 ug/mL
							Acridine	50 ug/mL
							Benzo(b)thiophene	50 ug/mL
							Benzo[e]pyrene	50 ug/mL
							Biphenyl	50 ug/mL
							Carbazole	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz[a,h]acridine	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz[a,j]acridine	50 ug/mL
							Dibenzofuran	50 ug/mL
							Dibenzothiophene	50 ug/mL
							Indene	50 ug/mL
							Indole	50 ug/mL
							Perylene	50 ug/mL
							Quinoline	50 ug/mL
					CSLP-LCS-Stk2_00026	0.1 mL	2,3,5-Trimethylnaphthalene	50 ug/mL
							2,3-Benzofuran	50 ug/mL
							2,3-Dihydroindene	50 ug/mL
							2,6-Dimethylnaphthalene	50 ug/mL
							3-Methylcholanthrene	50 ug/mL
							7,12-Dimethylbenz (a) anthracene	50 ug/mL
							Acridine	50 ug/mL
							Benzo (b) thiophene	50 ug/mL
							Benzo [e] pyrene	50 ug/mL
							Biphenyl	50 ug/mL
							Carbazole	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz [a,h] acridine	50 ug/mL
							Dibenz [a,j] acridine	50 ug/mL
							Dibenzofuran	50 ug/mL
							Dibenzothiophene	50 ug/mL
							Indene	50 ug/mL
							Indole	50 ug/mL
							Perylene	50 ug/mL
							Quinoline	50 ug/mL
					CSLP-LCS-Stk3_00024	1.25 mL	1,2:7,8-Dibenzpyrene	50 ug/mL
							1-Methylphenanthrene	50 ug/mL
							6-Methylchrysene	50 ug/mL
							7H-Dibenzo [c,g] carbazole	50 ug/mL
							Dibenzo (def,p) chrysene	50 ug/mL
							Dibenzo [a,e] pyrene	50 ug/mL
							Dibenzo [a,h] pyrene	50 ug/mL
					CSLP-LCS-Stk3_00025	1.25 mL	1,2:7,8-Dibenzpyrene	50 ug/mL
							1-Methylphenanthrene	50 ug/mL
							6-Methylchrysene	50 ug/mL
							7H-Dibenzo [c,g] carbazole	50 ug/mL
							Dibenzo (def,p) chrysene	50 ug/mL
Dibenzo [a,e] pyrene	50 ug/mL							
Dibenzo [a,h] pyrene	50 ug/mL							
..CSLP-LCS-Stk1_00018	04/27/13	Accustandard, Lot 211041513			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
						2-Methylnaphthalene	2000 ug/mL	
						Acenaphthene	2000 ug/mL	
						Acenaphthylene	2000 ug/mL	
						Anthracene	2000 ug/mL	
						Benzo [a] anthracene	2000 ug/mL	
						Benzo [a] pyrene	2000 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz (a,h) anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..CSLP-LCS-Stk1_00019	03/23/13		Accustandard, Lot 211041513		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz (a,h) anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..CSLP-LCS-Stk2_00025	03/14/13		Accustandard, Lot 210061390-02		(Purchased Reagent)		2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz (a) anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo(b)thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Di-n-octyl phthalate	2000 ug/mL
							Dibenz[a,h]acridine	2000 ug/mL
							Dibenz[a,j]acridine	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Quinoline	2000 ug/mL
..CSLP-LCS-Stk2_00026	03/14/13		Accustandard, Lot 210061390-02		(Purchased Reagent)		2,3,5-Trimethylnaphthalene	2000 ug/mL
							2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							2,6-Dimethylnaphthalene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz (a) anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo (b) thiophene	2000 ug/mL
							Benzo [e] pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Di-n-octyl phthalate	2000 ug/mL
							Dibenz [a, h] acridine	2000 ug/mL
							Dibenz [a, j] acridine	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
..CSLP-LCS-Stk3_00024	01/11/14		Accustandard, Lot 210061394		(Purchased Reagent)		1,2:7,8-Dibenzpyrene	1000 ug/mL
							1-Methylphenanthrene	1000 ug/mL
							6-Methylchrysene	1000 ug/mL
							7H-Dibenzo [c, g] carbazole	1000 ug/mL
							Dibenzo (def, p) chrysene	1000 ug/mL
							Dibenzo [a, e] pyrene	1000 ug/mL
							Dibenzo [a, h] pyrene	1000 ug/mL
..CSLP-LCS-Stk3_00025	01/11/14		Accustandard, Lot 210061394		(Purchased Reagent)		1,2:7,8-Dibenzpyrene	1000 ug/mL
							1-Methylphenanthrene	1000 ug/mL
							6-Methylchrysene	1000 ug/mL
							7H-Dibenzo [c, g] carbazole	1000 ug/mL
							Dibenzo (def, p) chrysene	1000 ug/mL
							Dibenzo [a, e] pyrene	1000 ug/mL
							Dibenzo [a, h] pyrene	1000 ug/mL
CSLP_SIM_SURR_00014	03/23/13	09/21/12	P&T Methanol, Lot MethanolP&T_00039	100 mL	CSLP_FS_Surr_00005	0.6 mL	Chrysene-d12 (Surr)	0.3 ug/mL
							Fluorene-d10 (Surr)	0.3 ug/mL
							Naphthalene-d8 (Surr)	0.3 ug/mL
.CSLP_FS_Surr_00005	03/23/13	03/23/12	P&T Methanol, Lot MethanolP&T_00017	200 mL	CSLPSurrStock_00004	10 mL	Chrysene-d12 (Surr)	50 ug/mL
							Fluorene-d10 (Surr)	50 ug/mL
							Naphthalene-d8 (Surr)	50 ug/mL
..CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
MS-CSLPSIM.01_00028	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Perylene-d12	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-CSLPSIMstk_00014	4.2 uL	Acenaphthene-d10	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
							1-Methylnaphthalene	0.01008 ug/mL
							2-Methylnaphthalene	0.01008 ug/mL
							Acenaphthene	0.01008 ug/mL
							Acenaphthylene	0.01008 ug/mL
							Anthracene	0.01008 ug/mL
							Benzo[a]anthracene	0.01008 ug/mL
							Benzo[a]pyrene	0.01008 ug/mL
							Benzo[b]fluoranthene	0.01008 ug/mL
							Benzo[g,h,i]perylene	0.01008 ug/mL
							Benzo[k]fluoranthene	0.01008 ug/mL
							Chrysene	0.01008 ug/mL
							Dibenz(a,h)anthracene	0.01008 ug/mL
							Fluoranthene	0.01008 ug/mL
							Fluorene	0.01008 ug/mL
							Indeno[1,2,3-cd]pyrene	0.01008 ug/mL
							Naphthalene	0.01008 ug/mL
							Phenanthrene	0.01008 ug/mL
							Pyrene	0.01008 ug/mL
							2,3-Benzofuran	0.01008 ug/mL
							2,3-Dihydroindene	0.01008 ug/mL
							3-Methylcholanthrene	0.01008 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.01008 ug/mL
							Acridine	0.01008 ug/mL
							Benzo(b)thiophene	0.01008 ug/mL
							Benzo[e]pyrene	0.01008 ug/mL
							Biphenyl	0.01008 ug/mL
							Carbazole	0.01008 ug/mL
							Dibenzofuran	0.01008 ug/mL
							Dibenzothiophene	0.01008 ug/mL
							Indene	0.01008 ug/mL
							Indole	0.01008 ug/mL
							Perylene	0.01008 ug/mL
							Quinoline	0.01008 ug/mL
							Fluorene-d10 (Surr)	0.01008 ug/mL
							Naphthalene-d8 (Surr)	0.01008 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLP-SIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b)thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz(a)anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo(b)thiophene	200 ug/mL
							Benzo[e]pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL
							Quinoline	200 ug/mL
					CSLPSurrStock_00004	1 mL	Fluorene-d10 (Surr)	200 ug/mL
							Naphthalene-d8 (Surr)	200 ug/mL
...CSLP-LCS-Stk1_00019	03/23/13	Accustandard, Lot 211041513			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
						2-Methylnaphthalene	2000 ug/mL	
						Acenaphthene	2000 ug/mL	
						Acenaphthylene	2000 ug/mL	
						Anthracene	2000 ug/mL	
						Benzo[a]anthracene	2000 ug/mL	
						Benzo[a]pyrene	2000 ug/mL	
						Benzo[b]fluoranthene	2000 ug/mL	
						Benzo[g,h,i]perylene	2000 ug/mL	
						Benzo[k]fluoranthene	2000 ug/mL	
						Chrysene	2000 ug/mL	
						Dibenz(a,h)anthracene	2000 ug/mL	
						Fluoranthene	2000 ug/mL	
						Fluorene	2000 ug/mL	
						Indeno[1,2,3-cd]pyrene	2000 ug/mL	
						Naphthalene	2000 ug/mL	
						Phenanthrene	2000 ug/mL	
						Pyrene	2000 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...CSLP-LCS-Stk2_00026	03/14/13	Accustandard, Lot 210061390-02			(Purchased Reagent)		2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz (a) anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo (b) thiophene	2000 ug/mL
							Benzo [e] pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
...CSLPSurrStock_00004	03/23/13	Supelco, Lot L91316			(Purchased Reagent)		Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
MS-CSLPSIM.02_00027	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-CSLPSIMstk_00014	8.3 uL	1-Methylnaphthalene	0.01992 ug/mL
							2-Methylnaphthalene	0.01992 ug/mL
							Acenaphthene	0.01992 ug/mL
							Acenaphthylene	0.01992 ug/mL
							Anthracene	0.01992 ug/mL
							Benzo [a] anthracene	0.01992 ug/mL
							Benzo [a] pyrene	0.01992 ug/mL
							Benzo [b] fluoranthene	0.01992 ug/mL
							Benzo [g,h,i] perylene	0.01992 ug/mL
							Benzo [k] fluoranthene	0.01992 ug/mL
							Chrysene	0.01992 ug/mL
							Dibenz (a,h) anthracene	0.01992 ug/mL
							Fluoranthene	0.01992 ug/mL
							Fluorene	0.01992 ug/mL
							Indeno [1,2,3-cd] pyrene	0.01992 ug/mL
							Naphthalene	0.01992 ug/mL
							Phenanthrene	0.01992 ug/mL
							Pyrene	0.01992 ug/mL
							2,3-Benzofuran	0.01992 ug/mL
							2,3-Dihydroindene	0.01992 ug/mL
							3-Methylcholanthrene	0.01992 ug/mL
							7,12-Dimethylbenz (a) anthracene	0.01992 ug/mL
							Acridine	0.01992 ug/mL
							Benzo (b) thiophene	0.01992 ug/mL
							Benzo [e] pyrene	0.01992 ug/mL
							Biphenyl	0.01992 ug/mL
							Carbazole	0.01992 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	0.01992 ug/mL
							Dibenzothiophene	0.01992 ug/mL
							Indene	0.01992 ug/mL
							Indole	0.01992 ug/mL
							Perylene	0.01992 ug/mL
							Quinoline	0.01992 ug/mL
							Chrysene-d12 (Surr)	0.01992 ug/mL
							Fluorene-d10 (Surr)	0.01992 ug/mL
							Naphthalene-d8 (Surr)	0.01992 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLPSIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							7,12-Dimethylbenz (a) anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b) thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz (a) anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo(b) thiophene	200 ug/mL
							Benzo[e]pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					CSLPSurrStock_00004	1 mL	Quinoline	200 ug/mL
							Chrysene-d12 (Surr)	200 ug/mL
							Fluorene-d10 (Surr)	200 ug/mL
							Naphthalene-d8 (Surr)	200 ug/mL
...CSLP-LCS-Stk1_00019	03/23/13		Accustandard, Lot 211041513		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...CSLP-LCS-Stk2_00026	03/14/13		Accustandard, Lot 210061390-02		(Purchased Reagent)		2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz(a)anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo(b)thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
...CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
MS-CSLPSIM.15_00025	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-CSLPSIMstk_00014	62.5 uL	1-Methylnaphthalene	0.15 ug/mL
							2-Methylnaphthalene	0.15 ug/mL
							Acenaphthene	0.15 ug/mL
							Acenaphthylene	0.15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	0.15 ug/mL
							Benzo[a]anthracene	0.15 ug/mL
							Benzo[a]pyrene	0.15 ug/mL
							Benzo[b]fluoranthene	0.15 ug/mL
							Benzo[g,h,i]perylene	0.15 ug/mL
							Benzo[k]fluoranthene	0.15 ug/mL
							Chrysene	0.15 ug/mL
							Dibenz(a,h)anthracene	0.15 ug/mL
							Fluoranthene	0.15 ug/mL
							Fluorene	0.15 ug/mL
							Indeno[1,2,3-cd]pyrene	0.15 ug/mL
							Naphthalene	0.15 ug/mL
							Phenanthrene	0.15 ug/mL
							Pyrene	0.15 ug/mL
							2,3-Benzofuran	0.15 ug/mL
							2,3-Dihydroindene	0.15 ug/mL
							3-Methylcholanthrene	0.15 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.15 ug/mL
							Acridine	0.15 ug/mL
							Benzo(b)thiophene	0.15 ug/mL
							Benzo[e]pyrene	0.15 ug/mL
							Biphenyl	0.15 ug/mL
							Carbazole	0.15 ug/mL
							Dibenzofuran	0.15 ug/mL
							Dibenzothiophene	0.15 ug/mL
							Indene	0.15 ug/mL
							Indole	0.15 ug/mL
							Perylene	0.15 ug/mL
							Quinoline	0.15 ug/mL
							Chrysene-d12 (Surr)	0.15 ug/mL
							Fluorene-d10 (Surr)	0.15 ug/mL
							Naphthalene-d8 (Surr)	0.15 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLPFSIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b)thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
					2,3-Dihydroindene		200 ug/mL	
					3-Methylcholanthrene		200 ug/mL	
					7,12-Dimethylbenz (a) anthracene		200 ug/mL	
					Acridine		200 ug/mL	
					Benzo (b) thiophene		200 ug/mL	
					Benzo[e]pyrene		200 ug/mL	
					Biphenyl		200 ug/mL	
					Carbazole		200 ug/mL	
					Dibenzofuran		200 ug/mL	
					Dibenzothiophene		200 ug/mL	
					Indene		200 ug/mL	
					Indole		200 ug/mL	
					Perylene		200 ug/mL	
					Quinoline		200 ug/mL	
					CSLPSurrStock_00004	1 mL	Chrysene-d12 (Surr)	200 ug/mL
					Fluorene-d10 (Surr)		200 ug/mL	
					Naphthalene-d8 (Surr)		200 ug/mL	
...CSLP-LCS-Stk1_00019	03/23/13	Accustandard, Lot 211041513			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
						2-Methylnaphthalene	2000 ug/mL	
						Acenaphthene	2000 ug/mL	
						Acenaphthylene	2000 ug/mL	
						Anthracene	2000 ug/mL	
						Benzo[a]anthracene	2000 ug/mL	
						Benzo[a]pyrene	2000 ug/mL	
						Benzo[b]fluoranthene	2000 ug/mL	
						Benzo[g,h,i]perylene	2000 ug/mL	
						Benzo[k]fluoranthene	2000 ug/mL	
						Chrysene	2000 ug/mL	
						Dibenz (a,h) anthracene	2000 ug/mL	
						Fluoranthene	2000 ug/mL	
						Fluorene	2000 ug/mL	
						Indeno[1,2,3-cd]pyrene	2000 ug/mL	
						Naphthalene	2000 ug/mL	
						Phenanthrene	2000 ug/mL	
						Pyrene	2000 ug/mL	
...CSLP-LCS-Stk2_00026	03/14/13	Accustandard, Lot 210061390-02			(Purchased Reagent)		2,3-Benzofuran	2000 ug/mL
						2,3-Dihydroindene	2000 ug/mL	
						3-Methylcholanthrene	2000 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							7,12-Dimethylbenz (a) anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo(b) thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
...CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
							Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
MS-CSLPSIM0.3_00033	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Naphthalene-d8 (Surr)	1000 ug/mL
							Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
					MS-CSLPSIMstk_00014	125 uL	Phenanthrene-d10	0.6 ug/mL
							1-Methylnaphthalene	0.3 ug/mL
							2-Methylnaphthalene	0.3 ug/mL
							Acenaphthene	0.3 ug/mL
							Acenaphthylene	0.3 ug/mL
							Anthracene	0.3 ug/mL
							Benzo[a]anthracene	0.3 ug/mL
							Benzo[a]pyrene	0.3 ug/mL
							Benzo[b]fluoranthene	0.3 ug/mL
							Benzo[g,h,i]perylene	0.3 ug/mL
							Benzo[k]fluoranthene	0.3 ug/mL
							Chrysene	0.3 ug/mL
							Dibenz(a,h)anthracene	0.3 ug/mL
							Fluoranthene	0.3 ug/mL
							Fluorene	0.3 ug/mL
							Indeno[1,2,3-cd]pyrene	0.3 ug/mL
							Naphthalene	0.3 ug/mL
							Phenanthrene	0.3 ug/mL
							Pyrene	0.3 ug/mL
							2,3-Benzofuran	0.3 ug/mL
							2,3-Dihydroindene	0.3 ug/mL
							3-Methylcholanthrene	0.3 ug/mL
							7,12-Dimethylbenz (a) anthracene	0.3 ug/mL
							Acridine	0.3 ug/mL
							Benzo(b) thiophene	0.3 ug/mL
							Benzo[e]pyrene	0.3 ug/mL
							Biphenyl	0.3 ug/mL
							Carbazole	0.3 ug/mL
							Dibenzofuran	0.3 ug/mL
							Dibenzothiophene	0.3 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indene	0.3 ug/mL
							Indole	0.3 ug/mL
							Perylene	0.3 ug/mL
							Quinoline	0.3 ug/mL
							Chrysene-d12 (Surr)	0.3 ug/mL
							Fluorene-d10 (Surr)	0.3 ug/mL
							Naphthalene-d8 (Surr)	0.3 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLPSIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo(b)thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	Naphthalene-d8 (Surr)	1.2 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz(a)anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo(b)thiophene	200 ug/mL
							Benzo[e]pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL
							Quinoline	200 ug/mL
					CSLPSurrStock_00004	1 mL	Chrysene-d12 (Surr)	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene-d10 (Surr)	200 ug/mL
							Naphthalene-d8 (Surr)	200 ug/mL
...CSLP-LCS-Stk1_00019	03/23/13	Accustandard, Lot 211041513			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...CSLP-LCS-Stk2_00026	03/14/13	Accustandard, Lot 210061390-02			(Purchased Reagent)		2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz(a)anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo(b)thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
...CSLPSurrStock_00004	03/23/13	Supelco, Lot L91316			(Purchased Reagent)		Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
MS-CSLPSIM0.6_00029	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010		Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
					MS-CSLPSIMstk_00014		Phenanthrene-d10	0.6 ug/mL
							1-Methylnaphthalene	0.6 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							2,3-Benzofuran	0.6 ug/mL
							2,3-Dihydroindene	0.6 ug/mL
							3-Methylcholanthrene	0.6 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.6 ug/mL
							Acridine	0.6 ug/mL
							Benzo(b)thiophene	0.6 ug/mL
							Benzo[e]pyrene	0.6 ug/mL
							Biphenyl	0.6 ug/mL
							Carbazole	0.6 ug/mL
							Dibenzofuran	0.6 ug/mL
							Dibenzothiophene	0.6 ug/mL
							Indene	0.6 ug/mL
							Indole	0.6 ug/mL
							Perylene	0.6 ug/mL
							Quinoline	0.6 ug/mL
							Chrysene-d12 (Surr)	0.6 ug/mL
							Fluorene-d10 (Surr)	0.6 ug/mL
							Naphthalene-d8 (Surr)	0.6 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-CSLP-SIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b)thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	200 ug/mL
							Dibenz (a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz (a) anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo (b) thiophene	200 ug/mL
							Benzo [e] pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL
							Quinoline	200 ug/mL
					CSLPSurrStock_00004	1 mL	Chrysene-d12 (Surr)	200 ug/mL
							Fluorene-d10 (Surr)	200 ug/mL
							Naphthalene-d8 (Surr)	200 ug/mL
...CSLP-LCS-Stk1_00019	03/23/13	Accustandard, Lot 211041513		(Purchased Reagent)	1-Methylnaphthalene	2000 ug/mL		
					2-Methylnaphthalene	2000 ug/mL		
					Acenaphthene	2000 ug/mL		
					Acenaphthylene	2000 ug/mL		
					Anthracene	2000 ug/mL		
					Benzo [a] anthracene	2000 ug/mL		
					Benzo [a] pyrene	2000 ug/mL		
					Benzo [b] fluoranthene	2000 ug/mL		
					Benzo [g,h,i] perylene	2000 ug/mL		
					Benzo [k] fluoranthene	2000 ug/mL		
					Chrysene	2000 ug/mL		
					Dibenz (a,h) anthracene	2000 ug/mL		
					Fluoranthene	2000 ug/mL		
					Fluorene	2000 ug/mL		
					Indeno[1,2,3-cd]pyrene	2000 ug/mL		
					Naphthalene	2000 ug/mL		
					Phenanthrene	2000 ug/mL		
					Pyrene	2000 ug/mL		
...CSLP-LCS-Stk2_00026	03/14/13	Accustandard, Lot 210061390-02		(Purchased Reagent)	2,3-Benzofuran	2000 ug/mL		
					2,3-Dihydroindene	2000 ug/mL		
					3-Methylcholanthrene	2000 ug/mL		
					7,12-Dimethylbenz (a) anthracene	2000 ug/mL		

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316				Acridine	2000 ug/mL
							Benzo(b)thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
...CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Quinoline	2000 ug/mL
							Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
MS-CSLPSIM0.8_00024	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-CSLPSIMstk_00014	333.3 uL	1-Methylnaphthalene	0.79992 ug/mL
							2-Methylnaphthalene	0.79992 ug/mL
							Acenaphthene	0.79992 ug/mL
							Acenaphthylene	0.79992 ug/mL
							Anthracene	0.79992 ug/mL
							Benzo[a]anthracene	0.79992 ug/mL
							Benzo[a]pyrene	0.79992 ug/mL
							Benzo[b]fluoranthene	0.79992 ug/mL
							Benzo[g,h,i]perylene	0.79992 ug/mL
							Benzo[k]fluoranthene	0.79992 ug/mL
							Chrysene	0.79992 ug/mL
							Dibenz(a,h)anthracene	0.79992 ug/mL
							Fluoranthene	0.79992 ug/mL
							Fluorene	0.79992 ug/mL
							Indeno[1,2,3-cd]pyrene	0.79992 ug/mL
							Naphthalene	0.79992 ug/mL
							Phenanthrene	0.79992 ug/mL
							Pyrene	0.79992 ug/mL
							2,3-Benzofuran	0.79992 ug/mL
							2,3-Dihydroindene	0.79992 ug/mL
							3-Methylcholanthrene	0.79992 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.79992 ug/mL
							Acridine	0.79992 ug/mL
							Benzo(b)thiophene	0.79992 ug/mL
							Benzo[e]pyrene	0.79992 ug/mL
							Biphenyl	0.79992 ug/mL
							Carbazole	0.79992 ug/mL
							Dibenzofuran	0.79992 ug/mL
							Dibenzothiophene	0.79992 ug/mL
							Indene	0.79992 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-36732-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indole	0.79992 ug/mL
							Perylene	0.79992 ug/mL
							Quinoline	0.79992 ug/mL
							Chrysene-d12 (Surr)	0.79992 ug/mL
							Fluorene-d10 (Surr)	0.79992 ug/mL
							Naphthalene-d8 (Surr)	0.79992 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLPSIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b)thiophene	1.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	Naphthalene-d8 (Surr)	1.2 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
							2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz(a)anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo(b)thiophene	200 ug/mL
							Benzo[e]pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL
							Quinoline	200 ug/mL
					CSLPSurrStock_00004	1 mL	Chrysene-d12 (Surr)	200 ug/mL
							Fluorene-d10 (Surr)	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...CSLP-LCS-Stk1_00019	03/23/13		Accustandard, Lot 211041513		(Purchased Reagent)		Naphthalene-d8 (Surr)	200 ug/mL
							1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
...CSLP-LCS-Stk2_00026	03/14/13		Accustandard, Lot 210061390-02		(Purchased Reagent)		Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
							2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz(a)anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo(b)thiophene	2000 ug/mL
							Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
...CSLP-SurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
							Chrysene-d12 (Surr)	1000 ug/mL
MS-CSLPSIM1.2_00024	09/13/12	07/19/12	Methylene Chloride, Lot K51S02	500 uL	MS-CSLPSIM IS_00010	50 uL	Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
					MS-CSLPSIMstk_00014	500 uL	Perylene-d12	0.6 ug/mL
							Acenaphthene-d10	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
							1-Methylnaphthalene	1.2 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz (a,h) anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz (a) anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b) thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
.MS-CSLPSIM IS_00010	09/13/12	12/27/11	Methylene Chloride, Lot K07s05	10 mL	MS-CSLP FS IS_00004	150 uL	Perylene-d12	6 ug/mL
							Acenaphthene-d10	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-CSLP FS IS_00004	09/13/12	09/14/11	Methylene Chloride, Lot K07S05	10 ug/mL	MS-48081_00005	1 mL	Perylene-d12	400 ug/mL
					MS-48081_00006	1 mL	Perylene-d12	400 ug/mL
					MS-48417_00005	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48417_00006	1 mL	Acenaphthene-d10	400 ug/mL
					MS-48710-U_00005	1 mL	Phenanthrene-d10	400 ug/mL
					MS-48710-U_00006	1 mL	Phenanthrene-d10	400 ug/mL
...MS-48081_00005	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48081_00006	10/31/13		SUPELCO, Lot LB79372		(Purchased Reagent)		Perylene-d12	2000 ug/mL
...MS-48417_00005	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48417_00006	02/28/14		SUPELCO, Lot LB82102		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
...MS-48710-U_00005	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
...MS-48710-U_00006	04/30/14		SUPPELCO, Lot LB84263		(Purchased Reagent)		Phenanthrene-d10	2000 ug/mL
.MS-CSLPSIMstk_00014	03/14/13	05/15/12	Methylene Chloride, Lot k51s02	10 mL	CSLP-FS Stock_00013	60 uL	1-Methylnaphthalene	1.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2,3-Benzofuran	1.2 ug/mL
							2,3-Dihydroindene	1.2 ug/mL
							3-Methylcholanthrene	1.2 ug/mL
							7,12-Dimethylbenz(a)anthracene	1.2 ug/mL
							Acridine	1.2 ug/mL
							Benzo(b)thiophene	1.2 ug/mL
							Benzo[e]pyrene	1.2 ug/mL
							Biphenyl	1.2 ug/mL
							Carbazole	1.2 ug/mL
							Dibenzofuran	1.2 ug/mL
							Dibenzothiophene	1.2 ug/mL
							Indene	1.2 ug/mL
							Indole	1.2 ug/mL
							Perylene	1.2 ug/mL
							Quinoline	1.2 ug/mL
							Chrysene-d12 (Surr)	1.2 ug/mL
							Fluorene-d10 (Surr)	1.2 ug/mL
							Naphthalene-d8 (Surr)	1.2 ug/mL
..CSLP-FS Stock_00013	03/14/13	05/14/12	Methylene Chloride, Lot k51s02	5 mL	CSLP-LCS-Stk1_00019	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
					CSLP-LCS-Stk2_00026	0.5 mL	2,3-Benzofuran	200 ug/mL
							2,3-Dihydroindene	200 ug/mL
							3-Methylcholanthrene	200 ug/mL
							7,12-Dimethylbenz (a) anthracene	200 ug/mL
							Acridine	200 ug/mL
							Benzo (b) thiophene	200 ug/mL
							Benzo [e] pyrene	200 ug/mL
							Biphenyl	200 ug/mL
							Carbazole	200 ug/mL
							Dibenzofuran	200 ug/mL
							Dibenzothiophene	200 ug/mL
							Indene	200 ug/mL
							Indole	200 ug/mL
							Perylene	200 ug/mL
							Quinoline	200 ug/mL
					CSLPSurrStock_00004	1 mL	Chrysene-d12 (Surr)	200 ug/mL
							Fluorene-d10 (Surr)	200 ug/mL
							Naphthalene-d8 (Surr)	200 ug/mL
...CSLP-LCS-Stk1_00019	03/23/13	Accustandard, Lot 211041513			(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo [a] anthracene	2000 ug/mL
							Benzo [a] pyrene	2000 ug/mL
							Benzo [b] fluoranthene	2000 ug/mL
							Benzo [g,h,i] perylene	2000 ug/mL
							Benzo [k] fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz (a,h) anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...CSLP-LCS-Stk2_00026	03/14/13	Accustandard, Lot 210061390-02			(Purchased Reagent)		2,3-Benzofuran	2000 ug/mL
							2,3-Dihydroindene	2000 ug/mL
							3-Methylcholanthrene	2000 ug/mL
							7,12-Dimethylbenz (a) anthracene	2000 ug/mL
							Acridine	2000 ug/mL
							Benzo (b) thiophene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica DenverJob No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...CSLPSurrStock_00004	03/23/13		Supelco, Lot L91316		(Purchased Reagent)		Benzo[e]pyrene	2000 ug/mL
							Biphenyl	2000 ug/mL
							Carbazole	2000 ug/mL
							Dibenzofuran	2000 ug/mL
							Dibenzothiophene	2000 ug/mL
							Indene	2000 ug/mL
							Indole	2000 ug/mL
							Perylene	2000 ug/mL
							Quinoline	2000 ug/mL
MS-CSLPSIMSSV_00024	09/13/12	07/26/12	Methylene Chloride, Lot K51S02	500 uL	MS-SIM SSV_00061	15 uL	Chrysene-d12 (Surr)	1000 ug/mL
							Fluorene-d10 (Surr)	1000 ug/mL
							Naphthalene-d8 (Surr)	1000 ug/mL
							Indene	0.6 ug/mL
							1-Methylnaphthalene	0.6 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Carbazole	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Dibenzofuran	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
.MS-SIM SSV_00061	12/31/12	07/26/12	Methylene Chloride, Lot K51S02	10 mL	MS-HSLSSV STK_00010	1 mL	Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							Indene	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz (a,h) anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..MS-HSLSSV STK_00010	12/31/12	03/15/12	Methylene Chloride, Lot K41S03	10 mL	MS-21495919_00001	1 mL	Indene	200 ug/mL
					MS-48162_00006	1 mL	1-Methylnaphthalene	200 ug/mL
					MS-506508_00008	2 mL	2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz (a,h) anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-21495919_00001	03/14/14		Supelco, Lot LB90738		(Purchased Reagent)		Indene	2000 ug/mL
...MS-48162_00006	10/31/13		Supelco, Lot LB79536		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
...MS-506508_00008	09/30/14		Supelco, Lot LB87087		(Purchased Reagent)		2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL

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USA



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This pamphlet contains a Certificate of Analysis, T-Test
Worksheet, Chromatograph and Table.

PRODUCT: Z-014G-FL
DESCRIPTION: Expanded PAH Mix

LOT #: 211041513

SOLVENT: Dichloromethane:Benzoate (1:1)

EXPIRATION: Apr 27, 2013

The maximum variation is the expression
of this standard is ±5%.

Component	CAS #	Purity % (GC/MS)	Gravimetric Concentration ¹ (µg/mL)	Analyte Concentration ² (µg/mL)	±5% C.I.
Acenaphthene	83-32-9	99.3	2009	1995	± 16
Acenaphthylene	208-96-8	99.2	2004	1988	± 0
Anthracene	120-12-7	99.6	2000	1992	± 12.4
Benzo(a)anthracene	56-55-3	100	2003	2003	± 0
Benzo(a)pyrene	50-32-8	99.8	2003	1999	± 10.8
Benzo(b)fluoranthene	205-99-2	100	2004	2004	± 2.5
Benzo(g,h,i)perylene	191-24-2	99.6	2006	1998	± .8
Benzo(k)fluoranthene	207-08-9	99.5	2003	1993	± 15.3
Chrysene	218-01-9	100	2006	2006	± 104
Dibenz(a,h)anthracene	53-70-3	99.0	2000	1980	± 37.3
Fluoranthene	206-44-0	97.2	2065	2007	± 4.3
Fluorene	86-73-7	100	2003	2003	± 29.2
Indeno(1,2,3-cd)pyrene	193-39-5	99.6	2004	1996	± 37.3
Naphthalene	91-20-3	99.8	2011	2007	± 19.8
Phenanthrene	85-01-8	99.5	2004	1994	± 41
Pyrene	129-00-0	97.5	2060	2009	± 2.6
1-Methylnaphthalene	90-12-0	98.4	2003	1971	± 30.6
2-Methylnaphthalene	91-57-6	98.8	2012	1988	± 33.9

18 Components

1. All weights are traceable through National Institute of Standards & Technology - Cert No. 8325-4468

2. Analyte Concentration = Purity x Gravimetric Concentration

* Weight compensated to 100% purity

Certified by:

R. Cooper

NOTE: The Lot Number on the actual product may include a suffix not shown on this certificate (ex: -1A, -2B, etc.)
This is a modifier indicating the lot expiration date has been extended.

AccuStandard is accredited to ISO/IEC 17025:2005 and certified to ISO 9001:2000

OP-ORG-INO-001
Rev. 800

Component	Run #1	Run #2	Run #3	Mean	Std Dev	% RSD	C.I. Lot# 210041428	Run #1	Run #2	Run #3	Mean	Std Dev	% RSD	t.025 -test	C.I. Lot# 211041513
1 Naphthalene	287	285	286	286	1.00	0.3%	7.4	280	285	284	283	2.65	0.9%	1.8	19.8
2 2-Methylnaphthalene	317	316	317	317	0.58	0.2%	5.1	307	314	313	311	3.79	1.2%	2.4	33.9
3 1-Methylnaphthalene	306	306	305	306	0.58	0.2%	4.8	297	304	302	301	3.61	1.2%	2.2	30.6
4 Acenaphthylene	330	329	329	329	0.58	0.2%	0.0	324	332	332	329	4.62	1.4%	0.0	0.0
5 Acenaphthene	373	373	372	373	0.58	0.2%	0.5	361	398	368	376	19.66	5.2%	0.3	16.0
6 Fluorene	367	366	367	367	0.58	0.2%	4.4	357	364	363	361	3.79	1.0%	2.4	29.2
7 Phenanthrene	388	382	385	385	3.00	0.8%	33.2	371	378	376	375	3.61	1.0%	3.7	41.0
8 Anthracene	374	373	374	374	0.58	0.2%	1.9	367	374	373	371	3.79	1.0%	1.1	12.4
9 Fluoranthene	433	438	436	436	2.52	0.6%	1.5	427	441	436	435	7.09	1.6%	0.2	4.3
10 Pyrene	473	480	477	477	3.51	0.7%	1.1	468	485	479	477	8.62	1.8%	0.1	2.6
11 Chrysene	449	460	455	455	5.51	1.2%	57.6	418	436	432	429	9.45	2.2%	4.1	104.8
12 Benz(a)anthracene	490	486	488	488	2.00	0.4%	0.0	490	489	485	488	2.65	0.5%	0.0	0.0
13 Benzo(b)fluoranthene	482	511	497	497	14.50	2.9%	3.2	486	509	498	498	11.50	2.3%	0.1	2.5
14 Benzo(k)fluoranthene	499	513	506	506	7.00	1.4%	12.4	501	515	517	511	8.72	1.7%	0.8	15.3
15 Benzo(a)pyrene	492	519	506	506	13.50	2.7%	9.6	492	521	515	509	15.31	3.0%	0.3	10.8
16 Dibenz(a,h)anthracene	1017	1036	1027	1027	9.50	0.9%	31.4	991	1002	1013	1002	11.00	1.1%	2.9	37.3
17 Indeno(1,2,3-cd)pyrene	1017	1036	1027	1027	9.50	0.9%	31.4	991	1002	1013	1002	11.00	1.1%	2.9	37.3
18 Benzo(g,h,i)perylene	543	571	557	557	14.00	2.5%	19.1	551	552	552	552	0.58	0.1%	0.7	0.8

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This pamphlet contains a Certificate of Analysis, T-Test Worksheet, Chromatograph and Table.

PRODUCT: Z-014G-FL
DESCRIPTION: Expanded PAH Mix

LOT #: 211041513

SOLVENT: Dichloromethane:Benzoate (1:1)

EXPIRATION: Apr 27, 2013

The maximum concentration is the expiration of this standard is 25%.

Component	CAS #	Purity % (GC/MS)	Gravimetric Concentration ¹ (µg/mL)	Analyte Concentration ² (µg/mL)	±95% C.I.
Acenaphthene	83-32-9	99.3	2009	1995	± 16
Acenaphthylene	208-96-8	99.2	2004	1988	± 0
Anthracene	120-12-7	99.6	2000	1992	± 12.4
Benzo(a)anthracene	56-55-3	100	2003	2003	± 0
Benzo(a)pyrene	50-32-8	99.8	2003	1999	± 10.8
Benzo(b)fluoranthene	205-99-2	100	2004	2004	± 2.5
Benzo(g,h,i)perylene	191-24-2	99.6	2006	1998	± .8
Benzo(k)fluoranthene	207-08-9	99.5	2003	1993	± 15.3
Chrysene	218-01-9	100	2006	2006	± 104
Dibenz(a,h)anthracene	53-70-3	99.0	2000	1980	± 37.3
Fluoranthene	206-44-0	97.2	2065	2007	± 4.3
Fluorene	86-73-7	100	2003	2003	± 29.2
Indeno(1,2,3-cd)pyrene	193-39-5	99.6	2004	1996	± 37.3
Naphthalene	91-20-3	99.8	2011	2007	± 19.8
Phenanthrene	85-01-8	99.5	2004	1994	± 41
Pyrene	129-00-0	97.5	2060	2009	± 2.6
1-Methylnaphthalene	90-12-0	98.4	2003	1971	± 30.6
2-Methylnaphthalene	91-57-6	98.8	2012	1988	± 33.9

18 Components

1. All weights are traceable through National Institute of Standards & Technology - Cert No. 61252-9408

2. Analyte Concentration = Purity x Gravimetric Concentration

* Weight compensated to 100% purity

Certified by:

R. Cooper

NOTE: The Lot Number on the actual product may include a suffix not shown on this certificate (ex: -1A, -2B, etc.)
This is a modifier indicating the lot expiration date has been extended.
AccuStandard is accredited to ISO/IEC 17025:2005 and certified to ISO 9001:2000

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Rev. 800

Component	Run #1	Run #2	Run #3	Mean	Std Dev	% RSD	C.I. Lot# 210041428	Run #1	Run #2	Run #3	Mean	Std Dev	% RSD	t.025 -test	C.I. Lot# 211041513
1 Naphthalene	287	285	286	286	1.00	0.3%	7.4	280	285	284	283	2.65	0.9%	1.8	19.8
2 2-Methylnaphthalene	317	316	317	317	0.58	0.2%	5.1	307	314	313	311	3.79	1.2%	2.4	33.9
3 1-Methylnaphthalene	306	306	305	306	0.58	0.2%	4.8	297	304	302	301	3.61	1.2%	2.2	30.6
4 Acenaphthylene	330	329	329	329	0.58	0.2%	0.0	324	332	332	329	4.62	1.4%	0.0	0.0
5 Acenaphthene	373	373	372	373	0.58	0.2%	0.5	361	398	368	376	19.66	5.2%	0.3	16.0
6 Fluorene	367	366	367	367	0.58	0.2%	4.4	357	364	363	361	3.79	1.0%	2.4	29.2
7 Phenanthrene	388	382	385	385	3.00	0.8%	33.2	371	378	376	375	3.61	1.0%	3.7	41.0
8 Anthracene	374	373	374	374	0.58	0.2%	1.9	367	374	373	371	3.79	1.0%	1.1	12.4
9 Fluoranthene	433	438	436	436	2.52	0.6%	1.5	427	441	436	435	7.09	1.6%	0.2	4.3
10 Pyrene	473	480	477	477	3.51	0.7%	1.1	468	485	479	477	8.62	1.8%	0.1	2.6
11 Chrysene	449	460	455	455	5.51	1.2%	57.6	418	436	432	429	9.45	2.2%	4.1	104.8
12 Benz(a)anthracene	490	486	488	488	2.00	0.4%	0.0	490	489	485	488	2.65	0.5%	0.0	0.0
13 Benzo(b)fluoranthene	482	511	497	497	14.50	2.9%	3.2	486	509	498	498	11.50	2.3%	0.1	2.5
14 Benzo(k)fluoranthene	499	513	506	506	7.00	1.4%	12.4	501	515	517	511	8.72	1.7%	0.8	15.3
15 Benzo(a)pyrene	492	519	506	506	13.50	2.7%	9.6	492	521	515	509	15.31	3.0%	0.3	10.8
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17 Indeno(1,2,3-cd)pyrene	1017	1036	1027	1027	9.50	0.9%	31.4	991	1002	1013	1002	11.00	1.1%	2.9	37.3
18 Benzo(g,h,i)perylene	543	571	557	557	14.00	2.5%	19.1	551	552	552	552	0.58	0.1%	0.7	0.8



CERTIFICATE OF ANALYSIS

CATALOG NO: S-10461A
DESCRIPTION: Custom PAH Standard
LOT: 210061390-02
SOLVENT: Dichloromethane

3-15-12

EXPIRATION: Mar 14, 2013
DATE CERTIFIED: Mar 14, 2012
SAMPLE SIZE: 1 mL
STORAGE CONDITION: Freeze/Sonicate
HAZARDS: HARMFUL

Refer to the MSDS for
additional safety
information

- ☒ Included on ISO/IEC 17025 Scope of Accreditation
☒ Included on ISO Guide 34 Scope of Accreditation

Component	Cas Number	Purity % (GC/MS)	Prepared Concentration ¹ (µg/mL)	Certified Analyte Concentration ² (µg/mL)
Acridine	260-94-6	99.8	2002	1998
2,3-Benzofuran	271-89-6	99.3	2006	1992
Benzo(e)pyrene	192-97-2	100	2002	2002
Thianaphthene	95-15-8	99.7	2012	2006
Biphenyl	92-52-4	99.0	2002	1982
Carbazole	86-74-8	98.8	2012	1988
Dibenz(a,j)acridine	224-42-0	99.7	2004	1998
2,3,5-Trimethylnaphthalene	2245-38-7	98.8	2012	1988
Dibenzofuran	132-64-9	99.0	2008	1988
Quinoline	91-22-5	96.5	2084 *	2011
Perylene	198-55-0	100	2004	2004
Dibenz(a,h)acridine	226-36-8	98.8	2012	1988
Dibenzothiophene	132-65-0	98.3	2002	1968
7,12-Dimethylbenz(a)anthracene	57-97-6	100	2012	2012
2,6-Dimethylnaphthalene	581-42-0	99.5	2006	1996
Di-n-octyl phthalate	117-84-0	99.7	2008	2002
Indan	496-11-7	93.3	2148 *	2004
Indene	95-13-6	100	2002	2002
Indole	120-72-9	99.0	2006	1986
3-Methylcholanthrene	56-49-5	100	2010	2010

20 Components

* Weight compensated to 100% purity

1. All weights are traceable through NIST, Test No. 822-275872-11

2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. Those values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

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Rev. 7/11



CERTIFICATE OF ANALYSIS

CATALOG NO: S-10461A
DESCRIPTION: Custom PAH Standard
LOT: 210061390-02
SOLVENT: Dichloromethane

3-15-12

Refer to the MSDS for
additional safety
information

EXPIRATION: Mar 14, 2013
DATE CERTIFIED: Mar 14, 2012
SAMPLE SIZE: 1 mL
STORAGE CONDITION: Freeze/Sonicate
HAZARDS: HARMFUL

☒ Included on ISO/IEC 17025 Scope of Accreditation
☒ Included on ISO Guide 34 Scope of Accreditation

Component	Cas Number	Purity % (GC/MS)	Prepared Concentration ¹ (µg/mL)	Certified Analyte Concentration ² (µg/mL)
Acridine	260-94-6	99.8	2002	1998
2,3-Benzofuran	271-89-6	99.3	2006	1992
Benzo(e)pyrene	192-97-2	100	2002	2002
Thianaphthene	95-15-8	99.7	2012	2006
Biphenyl	92-52-4	99.0	2002	1982
Carbazole	86-74-8	98.8	2012	1988
Dibenz(a,j)acridine	224-42-0	99.7	2004	1998
2,3,5-Trimethylnaphthalene	2245-38-7	98.8	2012	1988
Dibenzofuran	132-64-9	99.0	2008	1988
Quinoline	91-22-5	96.5	2084 *	2011
Perylene	198-55-0	100	2004	2004
Dibenz(a,h)acridine	226-36-8	98.8	2012	1988
Dibenzothiophene	132-65-0	98.3	2002	1968
7,12-Dimethylbenz(a)anthracene	57-97-6	100	2012	2012
2,6-Dimethylnaphthalene	581-42-0	99.5	2006	1996
Di-n-octyl phthalate	117-84-0	99.7	2008	2002
Indan	496-11-7	93.3	2148 *	2004
Indene	95-13-6	100	2002	2002
Indole	120-72-9	99.0	2006	1986
3-Methylcholanthrene	56-49-5	100	2010	2010

20 Components

* Weight compensated to 100% purity

1. All weights are traceable through NIST, Test No. 822-275872-11

2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. Those values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

For use in routine laboratory analysis.

Certified by: R. Cooper
Russ Cooper, QC Manager

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

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Rev. 7/11



CERTIFICATE OF ANALYSIS

CATALOG NO: S-10461B-0.5X
DESCRIPTION: Custom PAH Standard
LOT: 211011104
SOLVENT: Dichloromethane

EXPIRATION: Jan 11, 2014
DATE CERTIFIED Jan 11, 2011
See reverse for additional certification information.
SAMPLE SIZE: 1 mL
STORAGE CONDITION: Ambient/Sonicate
HAZARDS: POISON

Component	CAS #	Purity % (GC/FID)	Prepared Concentration ¹ (µg/mL)	Certified Analyte Concentration ² (µg/mL)
1-Methylphenanthrene	832-69-9	98.8	1004	992
7H-Dibenzo(c,g)carbazole	194-59-2	100	1002	1002
Dibenzo(a,l)pyrene	191-30-0	99.5	1012	1007
Dibenzo(a,i)pyrene	189-55-9	100	1000	1000
6-Methylchrysene	1705-85-7	99.2	1004	996
Dibenzo(a,e)pyrene	192-65-4	99.4	1008	1002
Dibenzo(a,h)pyrene	189-64-0	100	1008	1008

1. All weights are traceable through NIST, Test No. 822/272103-05

2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is $\pm 2\%$ which is the Combined Uncertainty $u_c(y)$. It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is $U_c(y) \cdot K$ where K is the coverage factor at the 95% confidence level ($K=2$).

3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.



CERTIFICATE OF ANALYSIS

CATALOG NO: S-10461B-0.5X
DESCRIPTION: Custom PAH Standard
LOT: 211011104
SOLVENT: Dichloromethane

EXPIRATION: Jan 11, 2014
DATE CERTIFIED Jan 11, 2011
See reverse for additional certification information.
SAMPLE SIZE: 1 mL
STORAGE CONDITION: Ambient/Sonicate
HAZARDS: POISON

Component	CAS #	Purity % (GC/FID)	Prepared Concentration ¹ (µg/mL)	Certified Analyte Concentration ² (µg/mL)
1-Methylphenanthrene	832-69-9	98.8	1004	992
7H-Dibenzo(c,g)carbazole	194-59-2	100	1002	1002
Dibenzo(a,l)pyrene	191-30-0	99.5	1012	1007
Dibenzo(a,i)pyrene	189-55-9	100	1000	1000
6-Methylchrysene	1705-85-7	99.2	1004	996
Dibenzo(a,e)pyrene	192-65-4	99.4	1008	1002
Dibenzo(a,h)pyrene	189-64-0	100	1008	1008

1. All weights are traceable through NIST, Test No. 822/272103-05

2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is $\pm 2\%$ which is the Combined Uncertainty $u_c(y)$. It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is $U_c(y) \cdot K$ where K is the coverage factor at the 95% confidence level ($K=2$).

3. A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1-Methylnaphthalene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
2-Methylnaphthalene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Acenaphthene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Acenaphthylene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Anthracene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[a]anthracene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[a]pyrene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[b]fluoranthene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[g,h,i]perylene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[k]fluoranthene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Chrysene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenz(a,h)anthracene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Fluoranthene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Fluorene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Indeno[1,2,3-cd]pyrene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Naphthalene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL

1mL CSLP_FS-LCS-00005 MeCl₂ exchanged.
all 3/23/12 PIP: H



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Phenanthrene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Pyrene	CSLP-LCS-Stk1_00018	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
1-Methylnaphthalene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
2-Methylnaphthalene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Acenaphthene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Acenaphthylene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Anthracene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[a]anthracene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[a]pyrene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[b]fluoranthene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[g,h,i]perylene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[k]fluoranthene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Chrysene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenz(a,h)anthracene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Fluoranthene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Fluorene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Indeno[1,2,3-cd]pyrene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Naphthalene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Phenanthrene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
Pyrene	CSLP-LCS-Stk1_00019	04/27/2013	2000.000	ug/mL	50.00000	ug/mL
1,1'-Biphenyl	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3,5-Trimethylnaphthalene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3-Benzofuran	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3-Dihydroindene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,6-Dimethylnaphthalene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
3-Methylcholanthrene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
7,12-Dimethylbenz(a)anthracene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Acridine	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo(b)thiophene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[e]pyrene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Carbazole	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenz[a,h]acridine	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Dibenz[a,j]acridine	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenzofuran	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenzothiophene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Di-n-octyl phthalate	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Indene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Indole	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Perylene	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Quinoline	CSLP-LCS-Stk2_00025	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
1,1'-Biphenyl	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3,5-Trimethylnaphthalene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3-Benzofuran	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,3-Dihydroindene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
2,6-Dimethylnaphthalene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
3-Methylcholanthrene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
7,12-Dimethylbenz(a)anthracene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Acridine	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Benzo(b)thiophene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Benzo[e]pyrene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Carbazole	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenz[a,h]acridine	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenz[a,j]acridine	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenzofuran	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Dibenzothiophene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Di-n-octyl phthalate	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Indene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Indole	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Perylene	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
Quinoline	CSLP-LCS-Stk2_00026	03/14/2013	2000.000	ug/mL	50.00000	ug/mL
1,2,7,8-Dibenzpyrene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
1-Methylphenanthrene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
6-Methylchrysene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
7H-Dibenzo[c,g]carbazole	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL



Reagent ID: CSLP_FS_LCS_00005

Description:	50ug/mL LCS for Full Scan 8270 CSLP	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	50.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329134		
Comment:	Take 1.25mL of CSLP-LCS-Stk1 (Expanded PAH Mix, Z-014G-FL (Ambient)), and 1.25mL of CSLP-LCS-Stk2 (Custom PAH Standard, S-10461A (Frozen)), and 2.5mL CSLP-LCS-Stk3 (Custom PAH Standard, S-10461B-0.5X (Ambient)) and dilute to 50mL in P&T MeOH). Must be exchanged to MeCl prior to verification		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Dibenzo(def,p)chrysene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
Dibenzo[a,e]pyrene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
Dibenzo[a,h]pyrene	CSLP-LCS-Stk3_00024	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
1,2:7,8-Dibenzpyrene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
1-Methylphenanthrene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
6-Methylchrysene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
7H-Dibenzo[c,g]carbazole	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
Dibenzo(def,p)chrysene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
Dibenzo[a,e]pyrene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL
Dibenzo[a,h]pyrene	CSLP-LCS-Stk3_00025	01/11/2014	1000.000	ug/mL	50.00000	ug/mL



Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
CSLP-LCS-Stk1_000 18	1 of 3 stocks for CSLP stk	ASTD	04/27/13	Accustandard	211041513	Z-014G-FL	1.15000	mL
CSLP-LCS-Stk1_000 19	1 of 3 stocks for CSLP stk	ASTD	04/27/13	Accustandard	211041513	Z-014G-FL	0.10000	mL
CSLP-LCS-Stk2_000 25	# 2 of 3 stocks for CLSP stk	ASTD	03/14/13	Accustandard	210061390-02	S-10461A	1.15000	mL
CSLP-LCS-Stk2_000 26	# 2 of 3 stocks for CLSP stk	ASTD	03/14/13	Accustandard	210061390-02	S-10461A	0.10000	mL
CSLP-LCS-Stk3_000 24	Part 3 of 3 stocks for CSLP stk	ASTD	01/11/14	Accustandard	210061394	S-10461B-05X	1.25000	mL
CSLP-LCS-Stk3_000 25	Part 3 of 3 stocks for CSLP stk	ASTD	01/11/14	Accustandard	210061394	S-10461B-05X	1.25000	mL

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: 032612.B
 Sample Matrix: LIQUID Fraction: SV
 Lab Smp Id: CSLP_FS_LCS_00005
 Level: LOW Operator: ILCZYSZD
 Data Type: MS DATA SampleType: LCS
 SpikeList File: 3E-CSLPLCS.spk Quant Type: ISTD
 Sublist File: allpah.sub
 Method File: \\DenSvr03\Public\chem\MSS\X4.i\032612.B\CSLPFS.m
 Misc Info:

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 2,3-Benzofuran	50.00	41.80	83.60	30-150
2 2,3-Dihydroindene	50.00	40.03	80.06	30-150
3 1H-Indene	50.00	42.27	84.54	49-108
6 Naphthalene	50.00	44.96	89.93	43-128
8 Benzo(b)thiophene	50.00	43.24	86.49	30-150
9 Quinoline	50.00	44.37	88.74	40-126
11 1H-Indole	50.00	45.61	91.22	30-150
12 2-Methylnaphthalen	50.00	45.68	91.36	47-138
13 1-Methylnaphthalen	50.00	46.23	92.45	30-150
14 Biphenyl	50.00	46.53	93.07	30-150
15 2,6-Dimethyl Napht	50.00	45.82	91.64	30-150
16 Acenaphthylene	50.00	48.61	97.22	30-150
18 Acenaphthene	50.00	48.30	96.60	30-150
19 Dibenzofuran	50.00	47.72	95.44	30-150
20 2,3,5-Trimethyl Na	50.00	48.54	97.08	30-150
22 Fluorene	50.00	49.98	99.96	51-120
23 Dibenzothiophene	50.00	49.48	98.96	30-150
25 Phenanthrene	50.00	50.62	101.24	30-150
26 Anthracene	50.00	51.70	103.41	30-150
27 Acridine	50.00	50.86	101.71	30-150
28 Carbazole	50.00	49.74	99.49	30-150
29 1-Methyl Phenanthr	50.00	47.50	95.00	30-150
30 Fluoranthene	50.00	52.35	104.70	30-150
31 Pyrene	50.00	52.20	104.40	30-150
34 Benzo(a)anthracene	50.00	50.83	101.66	30-150
35 Chrysene	50.00	53.50	107.01	43-124
36 6-Methyl Chrysene	50.00	49.21	98.41	30-150
32 7,12-Dimethylbenz(50.00	49.02	98.04	30-150
38 Benzo(b)fluoranth	50.00	51.02	102.04	30-150
40 Benzo(k)fluoranth	50.00	51.60	103.20	30-150
41 Benzo(e)pyrene	50.00	50.51	101.02	30-150
43 Benzo(a)pyrene	50.00	51.47	102.95	30-150
44 Perylene	50.00	49.82	99.65	30-150
45 3-Methylcholanthre	50.00	49.58	99.17	30-150
46 Dibenz(a,h)acridin	50.00	41.41	82.83	30-150
47 Dibenz(a,j)acridin	50.00	48.46	96.92	30-150
48 Indeno(1,2,3-cd)py	50.00	49.80	99.61	30-150
49 Dibenz(a,h)anthrac	50.00	52.63	105.27	30-150
50 7H-dibenzo(c,g)car	50.00	46.30	92.61	30-150
51 Benzo(g,h,i)peryle	50.00	50.13	100.26	30-150

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
52 Dibenzo(a,l)pyrene	50.00	46.58	93.17	30-150
53 Dibenzo(a,e)pyrene	50.00	47.22	94.44	30-150
54 Dibenzo(a,i)pyrene	50.00	50.64	101.27	30-150
55 Dibenzo(a,h)pyrene	50.00	44.67	89.34	30-150

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 Naphthalene-d8 (Su	50.00	1.875	3.75*	37-107
\$ 21 Fluorene-d10 (Sur	50.00	0.0000	*	36-127
\$ 33 Chrysene-d12 (Sur	50.00	0.0000	*	25-160



Reagent ID: CSLP_FS_Surr_00005

Description:	50 ug/mL in P&T MeOH	Expiration Date:	03/23/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	200.000 mL	Solvent:	P&T Methanol
Creation Date:	03/23/2012	Solvent Lot:	MethanolP&T_00017
Container(s):	1329392		
Comment:	Take 10 mL of CSLP Custom Surrogate Stock (CSLPSurrStock) and dilute to 200 mL in P&T MeOH.		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Chrysene-d12 (Surr)	CSLPSurrStock_00004	03/31/2013	1000.000	ug/mL	50.00000	ug/mL
Fluorene-d10 (Surr)	CSLPSurrStock_00004	03/31/2013	1000.000	ug/mL	50.00000	ug/mL
Naphthalene-d8 (Surr)	CSLPSurrStock_00004	03/31/2013	1000.000	ug/mL	50.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
CSLPSurrStock_0004	8270CSLPSurrStock 1000ug/ml	ASTD	03/31/13	Supelco	L91316	21508436	10.00000	mL

1mL CSLP_FS_Surr_00005 MeCl₂ exchanged.
QA 3/23/12 PIP:H

TestAmerica

RECOVERY REPORT

Client Name: Client SDG: 032612.B
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: CSLP_FS_SURR_00005
Level: LOW Operator: ILCZYSZD
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: 3E-CSLPLCS.spk Quant Type: ISTD
Sublist File: allpah.sub
Method File: \\DenSvr03\Public\chem\MSS\X4.i\032612.B\CSLPFS.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 5 Naphthalene-d8 (Su	50.00	48.46	96.92	37-107
\$ 21 Fluorene-d10 (Surr	50.00	48.40	96.81	36-127
\$ 33 Chrysene-d12 (Surr	50.00	49.11	98.22	25-160



Reagent ID: CSLP_SIM_LCS_00004

Description:	0.3 ug/mL CSLP LCS	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	100.000 mL	Solvent:	P&T Methanol
Creation Date:	03/30/2012	Solvent Lot:	MethonalP&T_00018
Container(s):	1340881		
Comment:	Take 0.6 mL of CSLP_FS_LCS and dilute to 100 mL in P&T MeOH. Required MeCl ₂ exchange for verification.		

*00019 SDV
3/30/12*

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,1'-Biphenyl	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
1,2,7,8-Dibenzpyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
1-Methylnaphthalene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
1-Methylphenanthrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
2,3,5-Trimethylnaphthalene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
2,3-Benzofuran	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
2,3-Dihydroindene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
2,6-Dimethylnaphthalene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
2-Methylnaphthalene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
3-Methylcholanthrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
6-Methylchrysene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
7,12-Dimethylbenz(a)anthracene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
7H-Dibenzo[c,g]carbazole	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Acenaphthene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Acenaphthylene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Acridine	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Anthracene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL

*1mL CSLP-SIM-LCS-00004 MeCl₂
exchanged. Page 2 of 2 3/30/12 PIP:E*



Reagent ID: CSLP_SIM_LCS_00004

Description:	0.3 ug/mL CSLP LCS	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	100.000 mL	Solvent:	P&T Methanol
Creation Date:	03/30/2012	Solvent Lot:	MethonalP&T_00018
Container(s):	1340881		
Comment:	Take 0.6 mL of CSLP_FS_LCS and dilute to 100 mL in P&T MeOH. Required MeCl ₂ exchange for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Benzo(b)thiophene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[a]anthracene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[a]pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[b]fluoranthene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[e]pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[g,h,i]perylene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Benzo[k]fluoranthene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Carbazole	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Chrysene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenz(a,h)anthracene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenz[a,h]acridine	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenz[a,j]acridine	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenzo(def,p)chrysene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenzo[a,e]pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenzo[a,h]pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenzofuran	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Dibenzothiophene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL



Reagent ID: CSLP_SIM_LCS_00004

Description:	0.3 ug/mL CSLP LCS	Expiration Date:	03/14/2013
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Oster, Susan H
Reagent Volume:	100.000 mL	Solvent:	P&T Methanol
Creation Date:	03/30/2012	Solvent Lot:	MethonalP&T_00018
Container(s):	1340881		
Comment:	Take 0.6 mL of CSLP_FS_LCS and dilute to 100 mL in P&T MeOH. Required MeCl2 exchange for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Di-n-octyl phthalate	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Fluoranthene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Fluorene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Indene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Indeno[1,2,3-cd]pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Indole	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Naphthalene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Perylene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Phenanthrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Pyrene	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL
Quinoline	CSLP_FS_LCS_00005	03/14/2013	50.00000	ug/mL	0.30000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
CSLP_FS_LCS_00005	50ug/mL LCS for Full Scan 8270 CSLP		03/14/13				0.60000	mL

TestAmerica

PAH SIM ANALYSIS QUANTITATION REPORT

Data file : \\DenSvr03\Public\chem\MSS\F.i\041712.b\F3916.D
Lab Smp Id: csllpsimlcs00004
Inj Date : 17-APR-2012 23:00
Operator : vasquezk Inst ID: F.i
Smp Info : csllpsimlcs00004
Misc Info :
Comment : SOP: DEN-MS-0005
Method : \\DenSvr03\Public\chem\MSS\F.i\041712.b\CSLPSIM.m
Meth Date : 19-Apr-2012 14:03 vasquezk Quant Type: ISTD
Cal Date : 17-APR-2012 12:26 Cal File: F3898.D
Als bottle: 20 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 3E-CSLPLCS4L.sub
Target Version: 4.14
Processing Host: DENPC365

Concentration Formula: Amt * DF * Vf / Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	1000.000	final volume at end of extraction (uL)
Vs	1000.000	volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS		
		QUANT SIG					ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	{ng/ml}	{ ng/L}
=====		=====	=====	=====	=====	=====	=====	=====
* 17 Acenaphthene-d10		164	9.687	9.687	{1.000}	201085	600.000	
* 24 Phenanthrene-d10		188	12.296	12.304	{1.000}	340397	600.000	
* 42 Perylene-d12		264	18.949	18.957	{1.000}	431604	600.000	
\$ 5 Naphthalene-d8 (Surr)		136	Compound Not Detected.					
\$ 21 Fluorene-d10 (Surr)		176	Compound Not Detected.					
\$ 33 Chrysene-d12 (Surr)		240	Compound Not Detected.					
1 2,3-Benzofuran		118	4.537	4.542	{0.468}	71599	255.508	255.5
2 2,3-Dihydroindene		117	4.934	4.939	{0.509}	88096	240.609	240.6
3 1H-Indene		116	5.043	5.048	{0.521}	86742	254.490	254.5
6 Naphthalene		128	6.507	6.507	{0.672}	149622	262.040	262.0
8 Benzo(b)thiophene		134	6.598	6.598	{0.681}	128287	254.939	254.9
9 Quinoline		129	7.099	7.099	{0.733}	71037	220.115	220.1
11 1H-Indole		117	7.644	7.649	{0.789}	72552	239.951	240.0
12 2-Methylnaphthalene		142	7.753	7.758	{0.800}	98897	255.043	255.0
13 1-Methylnaphthalene		142	7.943	7.943	{0.820}	94052	263.380	263.4
14 Biphenyl		154	8.620	8.620	{0.890}	125080	256.099	256.1
16 Acenaphthylene		152	9.428	9.428	{0.973}	138683	251.573	251.6
18 Acenaphthene		154	9.741	9.741	{1.006}	91131	257.417	257.4
19 Dibenzofuran		168	10.053	10.064	{1.038}	138749	259.792	259.8
22 Fluorene		166	10.664	10.664	{0.867}	106922	260.859	260.8
23 Dibenzothiophene		184	12.123	12.132	{0.986}	158108	262.766	262.8
25 Phenanthrene		178	12.339	12.339	{1.004}	162232	265.464	265.5

Compounds	QUANT SIG					CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/ml)	FINAL (ng/L)
=====	=====	=====	=====	=====	=====	=====	=====
26 Anthracene	178	12.425	12.425	{1.011}	143521	260.437	260.4
27 Acridine	179	12.495	12.495	{1.016}	101330	245.924	245.9
28 Carbazole	167	12.719	12.728	{1.034}	134027	260.082	260.1
30 Fluoranthene	202	14.354	14.363	{1.167}	178995	280.014	280.0
31 Pyrene	202	14.739	14.743	{1.199}	191657	278.203	278.2
34 Benzo (a) anthracene	228	16.721	16.729	{0.882}	138187	256.488	256.5
35 Chrysene	228	16.781	16.790	{0.886}	190210	295.366	295.4
32 7,12-Dimethylbenz (a) anthracen	256	18.358	18.366	{0.969}	92556	330.765	330.8
38 Benzo (b) fluoranthene	252	18.381	18.388	{0.970}	217052	318.076	318.1
40 Benzo (k) fluoranthene	252	18.419	18.434	{0.972}	219554	290.821	290.8
41 Benzo (s) pyrene	252	18.782	18.797	{0.991}	202722	291.378	291.4
43 Benzo (a) pyrene	252	18.858	18.866	{0.995}	194909	287.525	287.5
44 Perylene	252	18.979	18.987	{1.002}	211788	288.216	288.2
45 3-Methylcholanthrene	268	19.357	19.366	{1.022}	106603	268.787	268.8
48 Indeno {1,2,3-cd} pyrene	276	20.726	20.745	{1.094}	221104	263.179	263.2
49 Dibenzo (a,h) anthracene	278	20.736	20.755	{1.094}	200079	286.331	286.3
50 7H-dibenzo (c,g) carbazole	267	21.076	21.096	{1.112}	127408	255.992	256.0
51 Benzo (g,h,i) perylene	276	21.272	21.291	{1.123}	219123	282.575	282.6

TestAmerica

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: F.i
Lab File ID: F3916.D
Lab Smp Id: cslpsimlcs00004
Analysis Type: SV
Quant Type: ISTD
Operator: vasquezk
Method File: \\DenSvr03\Public\chem\MSS\F.i\041712.b\CSLPSIM.m
Misc Info:

Calibration Date: 17-APR-2012
Calibration Time: 14:12

Level: LOW
Sample Type: WATER

Test Mode:

Use This File: \\DenSvr03\Public\chem\MSS\F.i\041712.b\F3901.D.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
17 Acenaphthene-d10	192160	96080	384320	201085	4.64
24 Phenanthrene-d10	328391	164196	656782	340397	3.66
42 Perylene-d12	423225	211613	846450	431604	1.98

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
17 Acenaphthene-d10	9.69	9.19	10.19	9.69	0.00
24 Phenanthrene-d10	12.30	11.80	12.80	12.30	0.00
42 Perylene-d12	18.95	18.45	19.45	18.95	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

TestAmerica

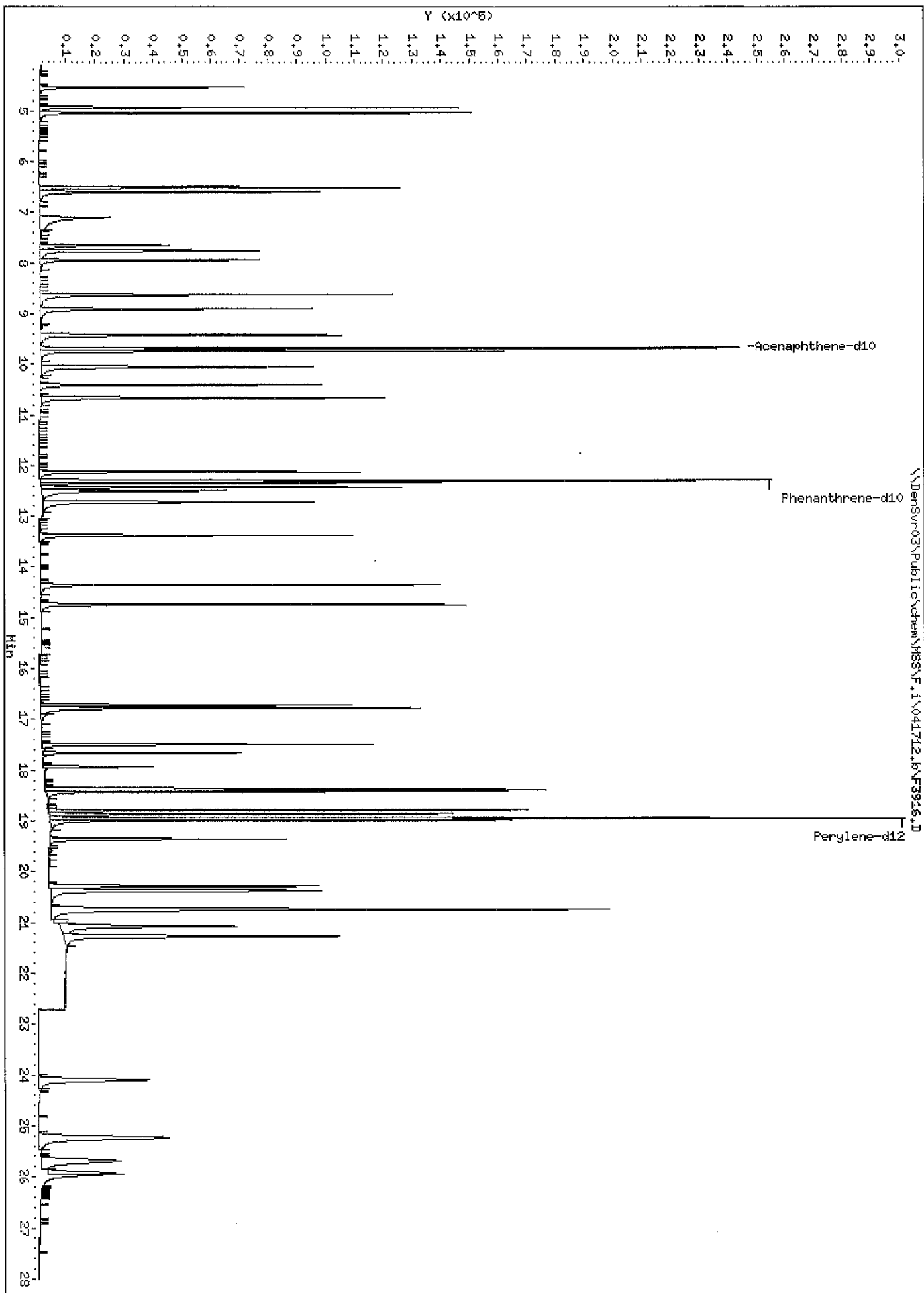
RECOVERY REPORT

Client Name: Client SDG: SDGa07092
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: csllpsimlcs00004
Level: LOW Operator: vasquezk
Data Type: MS DATA SampleType: LCS
SpikeList File: 3E-CSLP4L.spk Quant Type: ISTD
Sublist File: 3E-CSLPLCS4L.sub
Method File: \\DenSvr03\Public\chem\MSS\F.i\041712.b\CSLP4SIM.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
1 2,3-Benzofuran	300.0	255.5	85.17	30-150
2 2,3-Dihydroindene	300.0	240.6	80.20	30-150
3 1H-Indene	300.0	254.5	84.83	22-86
6 Naphthalene	300.0	262.0	87.35	27-95
8 Benzo(b)thiophene	300.0	254.9	84.98	30-150
9 Quinoline	300.0	220.1	73.37	20-112
11 1H-Indole	300.0	240.0	79.98	30-150
12 2-Methylnaphthalen	300.0	255.0	85.01	25-95
13 1-Methylnaphthalen	300.0	263.4	87.79	30-150
14 Biphenyl	300.0	256.1	85.37	30-150
16 Acenaphthylene	300.0	251.6	83.86	30-150
18 Acenaphthene	300.0	257.4	85.81	30-150
19 Dibenzofuran	300.0	259.8	86.60	30-150
22 Fluorene	300.0	260.8	86.95	34-96
23 Dibenzothiophene	300.0	262.8	87.59	30-150
25 Phenanthrene	300.0	265.5	88.49	30-150
26 Anthracene	300.0	260.4	86.81	30-150
27 Acridine	300.0	245.9	81.97	30-150
28 Carbazole	300.0	260.1	86.69	30-150
30 Fluoranthene	300.0	280.0	93.34	30-150
31 Pyrene	300.0	278.2	92.73	30-150
34 Benzo(a)anthracene	300.0	256.5	85.50	30-150
35 Chrysene	300.0	295.4	98.46	20-136
32 7,12-Dimethylbenz (300.0	330.8	110.26	30-150
38 Benzo(b)fluoranthene	300.0	318.1	106.03	30-150
40 Benzo(k)fluoranthene	300.0	290.8	96.94	30-150
41 Benzo(e)pyrene	300.0	291.4	97.13	37-105
43 Benzo(a)pyrene	300.0	287.5	95.84	30-150
44 Perylene	300.0	288.2	96.07	30-150
45 3-Methylcholanthrene	300.0	268.8	89.60	30-150
48 Indeno(1,2,3-cd)py	300.0	263.2	87.73	30-150
49 Dibenz(a,h)anthracene	300.0	286.3	95.44	30-150
51 Benzo(g,h,i)perylene	300.0	282.6	94.19	30-150

SURROGATE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
\$ 5 Naphthalene-d8 (S	300.0	0.0000	*	21-108

SURROGATE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
\$ 21 Fluorene-d10 (Sur	300.0	0.0000	*	21-108
\$ 33 Chrysene-d12 (Sur	300.0	0.0000	*	21-108





Reagent ID: CSLP_SIM_SURRE_00014

Description:	0.3ug/mL in P&T MeOH	Expiration Date:	03/23/2012
No. of Bottles:	1	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Wiggins, Joshua J
Reagent Volume:	100.000 mL	Solvent:	P&T Methanol
Creation Date:	09/21/2012	Solvent Lot:	MethanolP&T_00039
Container(s):	1628552		
Comment:	Take 0.6mL of CSLP_FS_Surr and dilute to 100mL in P&T MeOH.		

*1mL exchanged to MeCl2 9.24.12 BY MM ✓
Exchange to MeCl2 before verification. ✓ MM 9-24-12
MeCl2-Lydc-coosty*

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Chrysene-d12 (Surr)	CSLP_FS_Surr_00005	03/23/2013	50.00000	ug/mL	0.30000	ug/mL
Fluorene-d10 (Surr)	CSLP_FS_Surr_00005	03/23/2013	50.00000	ug/mL	0.30000	ug/mL
Naphthalene-d8 (Surr)	CSLP_FS_Surr_00005	03/23/2013	50.00000	ug/mL	0.30000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
CSLP_FS_Surr_00005	50 ug/mL in P&T MeOH		03/23/13				0.60000	mL

Preliminary Report

TestAmerica Denver

Recovery Report

Data File: \\Denchrom\ChromData\SMS_G5\20121011-5607.b\G5_7901.D
Lims ID: CSLP_SIM_SURRE_00014 Client ID:
Inject. Date: 11-Oct-2012 18:43:30 Dil. Factor: 1.0000
Sample Type: Client
Sample ID: 280-0005607-010
Misc. Info.: CSLP SIM SURRE =CSLP SIM SURRE
Operator: vasquezk Instrument ID: SMS_G5
Injection Vol: 1.0 ul ALS Bottle#: 9
Lims Batch ID: 5607 Lims Sample ID: 10
Detector: MS SCAN
Method: \\Denchrom\ChromData\SMS_G5\20121011-5607.b\MSG5_8270CSLPSIM.m
Last Update: 15-Oct-2012 10:47:22 Calib Date: 11-Oct-2012 17:27:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Denchrom\ChromData\SMS_G5\20121011-5607.b\G5_7899.D
Limit Group: MSSV - 8270 CSLP 1 Liter SIM
Integrator: RTE ID Type: Deconvolution ID
Column Type: Column Dia:
Process Host: DENPC365

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 Naphthalene-d8 (Surr)	300.0	288.6	96.21
\$ 5 Fluorene-d10 (Surr)	300.0	278.2	92.72
\$ 6 Chrysene-d12 (Surr)	300.0	303.0	100.99

Certificate of Composition

DESCRIPTION: TEST AMERICA

QUOTE 21508436

LOT NO.: LB91316

EXPIRATION DATE: Mar-2013

SOLVENT: METHYLENE CHLORIDE

ANALYTE	(1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT CONCENTRATION (3)			SUPELCO LOT NO

CHRYSENE-D12		1719-03-5	99.9	1000	+/-	5.0	LB78331
FLUORENE D10		81103-79-9	98.3	1002	+/-	5.0	LB84976
NAPHTHALENE-D8		1146-65-2	99.9	1000	+/-	5.0	LB80207

- (1) Listed in alphabetical order.
- (2) Determined by capillary GC-FID, unless otherwise noted.
- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.


Elwood Doughty
QA Manager

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Analytical

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Certificate of Composition



1315111

ID MS-21495919_00001

Exp 03/14/14 Pripd MGH

SUP HSLSSV Custom Mix 200

*Rec'd 3/14/12
mm*

DESCRIPTION: TEST AMERICA

QUOTE 21495919

LOT NO.:

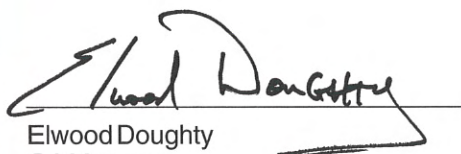
LB90738

MFG DATE: Mar-2012

SOLVENT: METHYLENE CHLORIDE

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT CONCENTRATION (3)	SUPELCO LOT NO
ACETOPHENONE	98-86-2	99.2	2004 +/- 10.0	LB61700
ALACHLOR	15972-60-8	99.9	2004 +/- 10.0	LB72325
ALPHA-METHYL STYRENE	98-83-9	99.9	1998 +/- 10.0	LB85105
ATRAZINE	1912-24-9	99.9	2002 +/- 10.0	LB77962
CAPROLACTAM	105-60-2	99.9	2004 +/- 10.0	LB34145
INDENE	95-13-6	99.2 (a)	2004 +/- 10.0	LB73509
N-DECANE	124-18-5	99.7	2002 +/- 10.0	LB90237
N-DOCOSANE	629-97-0	99.9	2000 +/- 10.0	LB31603
N-DODECANE	112-40-3	99.8	2002 +/- 10.0	LB78955
N-EICOSANE	112-95-8	99.9	2002 +/- 10.0	LB79677
N-OCTADECANE	593-45-3	98.1	2000 +/- 10.0	LB77591
N-TETRADECANE	629-59-4	99.7	2002 +/- 10.0	LB80294
1,4-DIOXANE	123-91-1	99.9	2004 +/- 10.0	LB82982
2,3-DICHLOROANILINE	608-27-5	99.9	2004 +/- 10.0	LB35894

- (1) Listed in alphabetical order.
- (2) Determined by capillary GC-FID, unless otherwise noted.
 - a) HPLC UV-254NM
- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.


Elwood Doughty
QA Manager

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Certificate of Analysis

DESCRIPTION: Perylene-d12

CATALOG NO.: 48081

MFG DATE: Oct-2010

LOT NO.: LB79372

EXPIRATION DATE: Oct-2013

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2)	ANALYTICAL (3) CONCENTRATION	STD DEV	SUPELCO LOT NO
PERYLENE-D12	1520-96-3	99.3	2002	2044	+/- 56.6	LB65066



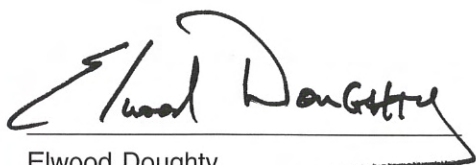
886612

ID: MS-48081_00005

Exp: 10/31/13 Prpd: DPI

SUP Perylene-d12 2000ug/m

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


Elwood Doughty
Quality Control Supervisor

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Certificate of Analysis

DESCRIPTION: Perylene-d12

CATALOG NO.: 48081

MFG DATE: Oct-2010

LOT NO.: LB79372

EXPIRATION DATE: Oct-2013

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2) CONCENTRATION	ANALYTICAL (3)	STD DEV	SUPELCO LOT NO
PERYLENE-D12	1520-96-3	99.3	2002	2044	+/- 56.6	LB65066



886613

ID: MS-48081_00006

Exp: 10/31/13 Prpd: DPI

SUP Perylene-d12 2000ug/m

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.

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Certificate of Analysis

Rec'd 3/14/12 mjt

DESCRIPTION: 1-Methylnaphthalene

CATALOG NO.: 48162

MFG DATE: Oct-2010

LOT NO.: LB79536

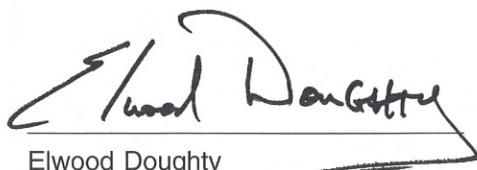
EXPIRATION DATE: Oct-2013

SOLVENT: METHANOL

1315125
ID MS-48162-00006
Exp 10/31/13 Ppda MGH
SUP 1-MethylNaph 2000ug/ml

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2) CONCENTRATION	ANALYTICAL (3) CONCENTRATION	STD DEV	SUPELCO LOT NO
1-METHYLNAPHTHALENE	90-12-0	99.6	2002	2000	+/- 6.5	LB65657

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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Analytical

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Certificate of Analysis

DESCRIPTION: Acenaphthene-d10

CATALOG NO.: 48417

MFG DATE: Feb-2011

LOT NO.: LB82102

EXPIRATION DATE: Feb-2014

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2)	ANALYTICAL (3) CONCENTRATION	STD DEV	SUPELCO LOT NO
ACENAPHTHENE-D10	15067-26-2	98.9	2001	2056	+/- 1.9	LB59859



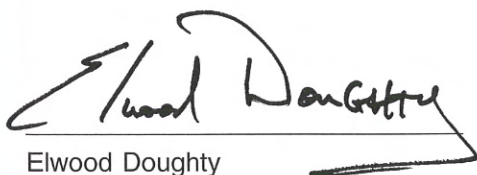
886638

ID: MS-48417_00005

Exp: 02/28/14 Prpd: DPI

SUP Acenaphthene-d10 2000

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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Certificate of Analysis

DESCRIPTION: Acenaphthene-d10

CATALOG NO.: 48417

MFG DATE: Feb-2011

LOT NO.: LB82102

EXPIRATION DATE: Feb-2014

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2)	ANALYTICAL (3) CONCENTRATION	STD DEV	SUPELCO LOT NO
ACENAPHTHENE-D10	15067-26-2	98.9	2001	2056	+/- 1.9	LB59859



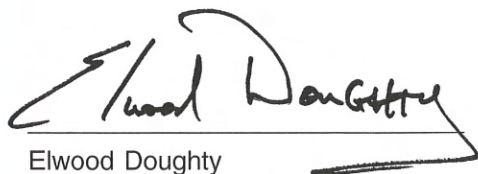
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ID: MS-48417_00006

Exp: 02/28/14 Prpd: DPI

SUP Acenaphthene-d10 2000

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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MS-48710-U-00005

DESCRIPTION: Phenanthrene-d10

CATALOG NO.: 48710-U

MFG DATE: Apr-2011

LOT NO.: LB84263

EXPIRATION DATE: Apr-2014

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2) CONCENTRATION	ANALYTICAL (3)	STD DEV	SUPELCO LOT NO
PHENANTHRENE-D10	1517-22-2	99.4	2001	1986	+/- 75.2	LB80379



886523

ID: MS-48710-U_00005

Exp: 04/30/14 Prpd: DPI

SUP Phenanthrene-d10 2000

- (1) Determined by capillary GC-FID, unless otherwise noted.
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- (3) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.

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Certificate of Analysis

DESCRIPTION: Phenanthrene-d10

MS-48710-U-00006

CATALOG NO.: 48710-U

MFG DATE: Apr-2011

LOT NO.: LB84263

EXPIRATION DATE: Apr-2014

SOLVENT: METHYLENE CHLORIDE

ANALYTE	CAS NUMBER	PERCENT PURITY (1)	WEIGHT (2) CONCENTRATION	ANALYTICAL (3)	STD DEV	SUPELCO LOT NO
PHENANTHRENE-D10	1517-22-2	99.4	2001	1986	+/- 75.2	LB80379



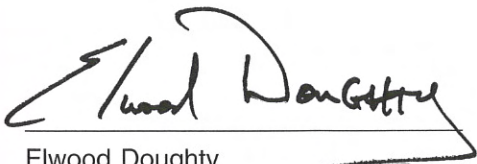
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ID: MS-48710-U_00006

Exp: 04/30/14 Prpd: DPI

SUP Phenanthrene-d10 2000

- (1) Determined by capillary GC-FID, unless otherwise noted.
- (2) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
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Rec'd 3/14/12 mnt

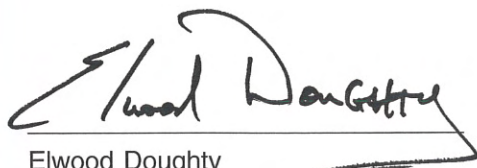
DESCRIPTION: CLP Semivolatiles Calibration Mix

CATALOG NO.: 506508
LOT NO.: LB87087MFG DATE: Sep-2011
EXPIRATION DATE: Sep-2014
1315216
ID MS-506508_00008
Exp: 09/30/14 Prpd: MGH
SUP CLP SemiVoa Cal Mix 1

SOLVENT: METHYLENE CHLORIDE:BENZENE 3:1

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT (3)	ANALYTICAL (4)	STD DEV	SUPELCO LOT NO
			CONCENTRATION			
ACENAPHTHENE	83-32-9	99.9	1000	1026	+/- 1.5	LB82590
ACENAPHTHYLENE	208-96-8	99.7	1000	1021	+/- 3.7	LB44362
ANTHRACENE	120-12-7	99.5	1000	1005	+/- 5.9	LB77576
AZOBENZENE	103-33-3	99.7	1000	1019	+/- 4.7	LB74863
BENZO (A) ANTHRACENE	56-55-3	99.4 (a)	1000	1017	+/- 15.3	LB78146
BENZO (A) PYRENE	50-32-8	99.9 (a)	1000	1017	+/- 5.7	LB79478
BENZO (B) FLUORANTHENE	205-99-2	99.9	1000	969	+/- 20.7	LB77269
BENZO (G,H,I) PERYLENE	191-24-2	99.6	1000	1021	+/- 8.7	LB62550
BENZO (K) FLUORANTHENE	207-08-9	99.9	1000	1008	+/- 12.2	LB84765
BENZYL BUTYL PHTHALATE	85-68-7	98.6	1000	1059	+/- 84.7	LB60340
BIS (2-CHLOROETHOXY) METHANE	111-91-1	98.5	1000	1008	+/- 8.1	LB71304
BIS (2-CHLOROETHYL) ETHER	111-44-4	99.9	1000	1002	+/- 6.8	LB33319
BIS (2-CHLOROISOPROPYL) ETHER	108-60-1	96.9	1000	1012	+/- 6.2	LB79031
BIS (2-ETHYLHEXYL) PHTHALATE	117-81-7	99.7	1000	1052	+/- 79.8	LB58359
CARBAZOLE	86-74-8	99.9	1000	1002	+/- 7.7	LB60643
CHRYSENE	218-01-9	99.9	1000	998	+/- 9.6	LB81272
DI-N-BUTYL PHTHALATE	84-74-2	99.5	1000	1012	+/- 13.1	LB64921
DI-N-OCTYL PHTHALATE	117-84-0	99.9	1000	1081	+/- 73.0	LB57195
DIBENZ (A,H) ANTHRACENE	53-70-3	99.5	1000	1026	+/- 8.8	LB77149

- (1) Listed in alphabetical order.
- (2) Determined by capillary GC-FID, unless otherwise noted.
 - a) HPLC UV-254NM
- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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PAGE 2 of 4

DESCRIPTION: CLP Semivolatiles Calibration Mix

CATALOG NO.: 506508

MFG DATE: Sep-2011

LOT NO.: LB87087

EXPIRATION DATE: Sep-2014

SOLVENT: METHYLENE CHLORIDE:BENZENE 3:1

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT (3) CONCENTRATION	ANALYTICAL (4) CONCENTRATION	STD DEV	SUPELCO LOT NO
DIBENZOFURAN	132-64-9	98.9	1000	1009	+/- 4.1	LB78814
DIETHYL PHTHALATE	84-66-2	99.2	1000	1023	+/- 6.2	LB60384
DIMETHYL PHTHALATE	131-11-3	99.9	1000	1022	+/- 4.3	LB30494
FLUORANTHENE	206-44-0	99.5	1000	1004	+/- 9.6	LB36331
FLUORENE	86-73-7	98.7	1000	1031	+/- 2.6	LB69442
HEXACHLOROENZENE	118-74-1	99.9	1000	998	+/- 5.9	LB60010
HEXACHLOROBUTADIENE	87-68-3	96.2	1000	1006	+/- 9.3	LB67777
HEXACHLOROCYCLOPENTADIENE	77-47-4	98.8	1000	1000	+/- 28.6	LB76931
HEXACHLOROETHANE	67-72-1	99.9	1000	1005	+/- 4.9	LB29072
INDENO (1,2,3-CD) PYRENE	193-39-5	99.2	1000	952	+/- 67.6	LB76867
ISOPHORONE	78-59-1	99.1	1000	1007	+/- 10.9	LB45460
N-NITROSODI-N-PROPYLAMINE	621-64-7	99.9	1000	1016	+/- 12.0	LB79763
N-NITROSODIMETHYLAMINE	62-75-9	99.9	1000	1004	+/- 13.4	LB56172
NAPHTHALENE	91-20-3	99.9	1000	1018	+/- 8.4	LB77841
NITROBENZENE	98-95-3	99.9	1000	1005	+/- 9.4	LB47070
PENTACHLOROPHENOL	87-86-5	99.9	1000	1029	+/- 32.6	LB75554
PHENANTHRENE	85-01-8	99.1	1000	1006	+/- 6.8	LB68872
PHENOL	108-95-2	99.9	1000	1015	+/- 8.6	LB57703
PYRENE	129-00-0	97.5	1000	997	+/- 6.4	LB70761

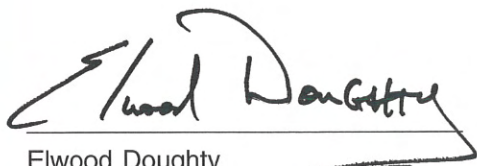
(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.

a) HPLC UV-254NM

- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.

(4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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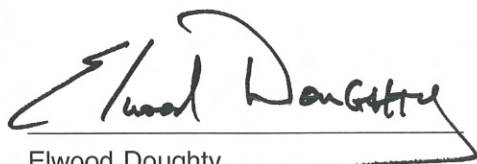
DESCRIPTION: CLP Semivolatiles Calibration Mix

CATALOG NO.: 506508
LOT NO.: LB87087MFG DATE: Sep-2011
EXPIRATION DATE: Sep-2014

SOLVENT: METHYLENE CHLORIDE:BENZENE 3:1

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT (3) CONCENTRATION	ANALYTICAL (4)	STD DEV	SUPELCO LOT NO
1,2-DICHLOROBENZENE	95-50-1	99.9	1000	1005	+/- 7.0	LA96474
1,2,4-TRICHLOROBENZENE	120-82-1	99.5	1000	1010	+/- 6.0	LB48083
1,3-DICHLOROBENZENE	541-73-1	99.9	1000	1007	+/- 3.4	LA72024
1,4-DICHLOROBENZENE	106-46-7	99.9	1000	1002	+/- 5.0	LB69983
2-CHLORONAPHTHALENE	91-58-7	99.4	1000	1018	+/- 1.5	LB48170
2-CHLOROPHENOL	95-57-8	99.2	1000	1013	+/- 11.0	LB54473
2-METHYL-4,6-DINITROPHENOL	534-52-1	99.9	1000	1063	+/- 62.5	LB31592
2-METHYLNAPHTHALENE	91-57-6	98.3	1000	1009	+/- 5.2	LB44448
2-METHYLPHENOL	95-48-7	99.8	1000	1000	+/- 7.9	LB30223
2-NITROANILINE	88-74-4	99.9	1000	1028	+/- 27.6	LB49936
2-NITROPHENOL	88-75-5	99.9	1000	1038	+/- 45.5	LB44736
2,4-DICHLOROPHENOL	120-83-2	98.8	1000	1011	+/- 13.3	LB76837
2,4-DIMETHYLPHENOL	105-67-9	99.8	1000	1010	+/- 9.9	LB43798
2,4-DINITROPHENOL	51-28-5	98.6	1000	1077	+/- 76.9	LB28389
2,4-DINITROTOLUENE	121-14-2	96.0	1000	1027	+/- 5.5	LB46632
2,4,5-TRICHLOROPHENOL	95-95-4	99.9	1000	993	+/- 30.8	LB35288
2,4,6-TRICHLOROPHENOL	88-06-2	99.9	1000	1024	+/- 7.9	LB65559
2,6-DINITROTOLUENE	606-20-2	99.9	1000	1024	+/- 15.7	LB60882
3-NITROANILINE	99-09-2	99.9	1000	1028	+/- 7.0	LB73829

- (1) Listed in alphabetical order.
- (2) Determined by capillary GC-FID, unless otherwise noted.
 - a) HPLC UV-254NM
- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.
- (4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


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DESCRIPTION: CLP Semivolatiles Calibration Mix

CATALOG NO.: 506508

MFG DATE: Sep-2011

LOT NO.: LB87087

EXPIRATION DATE: Sep-2014

SOLVENT: METHYLENE CHLORIDE:BENZENE 3:1

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT (3) CONCENTRATION	ANALYTICAL (4)	STD DEV	SUPELCO LOT NO
4-BROMOPHENYLPHENYL ETHER	101-55-3	98.8	1000	995	+/- 6.7	LB63786
4-CHLORO-3-METHYLPHENOL	59-50-7	99.9	1000	1021	+/- 17.2	LB75570
4-CHLOROANILINE	106-47-8	99.9	1000	1016	+/- 9.1	LB82916
4-CHLOROPHENYLPHENYL ETHER	7005-72-3	99.9	1000	1024	+/- 2.4	LB72185
4-METHYLPHENOL	106-44-5	99.9	1000	1013	+/- 8.8	LB32518
4-NITROANILINE	100-01-6	99.9	1000	1028	+/- 20.7	LB42566
4-NITROPHENOL	100-02-7	99.9	1000	1012	+/- 7.3	LB12692

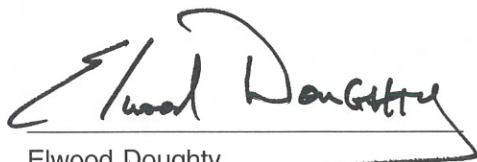
(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.

a) HPLC UV-254NM

- (3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.

(4) Determined by chromatographic analysis against an independently prepared reference lot. Mean of replicate injections.


Elwood Doughty
Quality Control Supervisor

Supelco warrants that its products conform to the information contained in this publication. Purchaser must determine the suitability of the product for its particular use. Please see the latest catalog or order invoice and packing slip for additional terms and conditions of sale.



595 North Harrison Road
Bellefonte, PA 16823-0048 USA
Phone (814) 359-3441

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Colorado	State Program	8	N/A
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAP	4	E87667
TestAmerica Denver	Idaho	State Program	10	CO00026
TestAmerica Denver	Illinois	NELAP	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAP	7	E-10166
TestAmerica Denver	Louisiana	NELAP	6	30785
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Maryland	State Program	3	268
TestAmerica Denver	Minnesota	NELAP	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAP	1	205310
TestAmerica Denver	New Jersey	NELAP	2	CO004
TestAmerica Denver	New Mexico	State Program	6	CO00026
TestAmerica Denver	New York	NELAP	2	11964
TestAmerica Denver	North Carolina DENR	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAP	10	CO200001
TestAmerica Denver	Pennsylvania	NELAP	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002
TestAmerica Denver	Tennessee	State Program	4	TN02944
TestAmerica Denver	Texas	NELAP	6	T104704183-08-TX
TestAmerica Denver	USDA	Federal		P330-08-00036
TestAmerica Denver	Utah	NELAP	8	QUAN5
TestAmerica Denver	Virginia	NELAP	3	460232
TestAmerica Denver	Washington	State Program	10	C583
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430
TestAmerica Denver	Wyoming (UST)	A2LA	8	

Accreditation may not be offered or required for all methods and analytes reported in this package Please contact your project manager for the laboratory's current list of certified methods and analytes.

8270C_SIM_LL

Semivolatile Organic Compound (GC/MS
SIM LL)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Matrix: Water Level: Low
GC Column (1): Vf-5MS ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	NTH #	FLR #	CRY #	
SLP10T-120612	280-36732-1	88	84	15	X
SLP10TD-120612	280-36732-2	89	83	16	X
SLP10TFB-120612	280-36732-3	79	74	85	
SLP6-120612	280-36732-4	60	58	13	X
W119-120612	280-36732-5	78	80	25	X
W48-120612	280-36732-6	75	83	43	
	MB 280-151568/1-A	77	67	80	
	LCS 280-151568/2-A	63	57	69	
SLP10T-120612 MS	280-36732-1 MS	82	80	18	X
SLP10T-120612 MSD	280-36732-1 MSD	80	78	23	X

	<u>QC LIMITS</u>
NTH = Naphthalene-d8 (Surr)	22-97
FLR = Fluorene-d10 (Surr)	23-84
CRY = Chrysene-d12 (Surr)	28-101

Column to be used to flag recovery values

FORM II 8270C SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: G5_8729.D
 Lab ID: LCS 280-151568/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
2,3-Benzofuran	75.0	46.4	62	30-150	
2,3-Dihydroindene	75.0	44.4	59	30-150	
1-Methylnaphthalene	75.0	45.9	61	30-150	
2-Methylnaphthalene	75.0	45.6	61	25-95	
3-Methylcholanthrene	75.0	21.5	29	30-150	*
Acenaphthene	75.0	45.8	61	30-150	
Acenaphthylene	75.0	38.1	51	30-150	
Acridine	75.0	35.8	48	30-150	
Anthracene	75.0	42.6	57	30-150	
Benzo[a]anthracene	75.0	46.3	62	30-150	
Benzo[a]pyrene	75.0	37.1	49	30-150	
Benzo[e]pyrene	75.0	50.2	67	37-105	
Benzo[b]fluoranthene	75.0	45.6	61	30-150	
Benzo(b)thiophene	75.0	45.9	61	30-150	
Benzo[k]fluoranthene	75.0	47.9	64	30-150	
Benzo[g,h,i]perylene	75.0	38.1	51	30-150	
Carbazole	75.0	44.0	59	30-150	
Chrysene	75.0	53.1	71	20-136	
Dibenz(a,h)anthracene	75.0	44.1	59	30-150	
Dibenzofuran	75.0	47.2	63	30-150	
Dibenzothiophene	75.0	47.5	63	30-150	
Fluoranthene	75.0	47.6	63	30-150	
Fluorene	75.0	45.0	60	34-96	
Indene	75.0	44.6	59	22-86	
Indole	75.0	32.6	43	30-150	
Indeno[1,2,3-cd]pyrene	75.0	42.2	56	30-150	
Naphthalene	75.0	47.4	63	27-95	
Perylene	75.0	22.8	30	30-150	
Phenanthrene	75.0	49.3	66	30-150	
Pyrene	75.0	47.1	63	30-150	
Quinoline	75.0	40.9	55	20-112	
7,12-Dimethylbenz(a)anthracene	75.0	14.0	19	30-150	*
Biphenyl	75.0	46.6	62	30-150	

Column to be used to flag recovery and RPD values

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: G5_8733.D
 Lab ID: 280-36732-1 MS Client ID: SLP10T-120612 MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
2,3-Benzofuran	80.2	ND	63.4	79	30-150	
2,3-Dihydroindene	80.2	0.76 J	60.6	75	30-150	
1-Methylnaphthalene	80.2	ND	65.4	82	30-150	
2-Methylnaphthalene	80.2	ND	64.7	81	25-95	
3-Methylcholanthrene	80.2	ND	ND	0	30-150	F
Acenaphthene	80.2	1.2 J	66.8	82	30-150	
Acenaphthylene	80.2	ND	59.7	74	30-150	
Acridine	80.2	ND	11.6	14	30-150	F
Anthracene	80.2	ND	59.7	74	30-150	
Benzo[a]anthracene	80.2	ND	10.2	13	30-150	F
Benzo[a]pyrene	80.2	ND	2.49 J	3	30-150	F
Benzo[e]pyrene	80.2	ND	3.39 J	4	37-105	F
Benzo[b]fluoranthene	80.2	ND	4.63 J	6	30-150	F
Benzo(b)thiophene	80.2	ND	63.2	79	30-150	
Benzo[k]fluoranthene	80.2	ND	4.24 J	5	30-150	F
Benzo[g,h,i]perylene	80.2	ND	2.84 J	4	30-150	F
Carbazole	80.2	ND	62.0	77	30-150	
Chrysene	80.2	ND	13.6	17	20-136	F
Dibenz(a,h)anthracene	80.2	ND	2.30 J	3	30-150	F
Dibenzofuran	80.2	ND	68.3	85	30-150	
Dibenzothiophene	80.2	ND	68.1	85	30-150	
Fluoranthene	80.2	ND	43.7	54	30-150	
Fluorene	80.2	ND	66.4	83	34-96	
Indene	80.2	ND	61.3	76	22-86	
Indole	80.2	ND	53.6	67	30-150	
Indeno[1,2,3-cd]pyrene	80.2	ND	2.53 J	3	30-150	F
Naphthalene	80.2	2.5 J	66.8	80	27-95	
Perylene	80.2	ND	ND	0	30-150	F
Phenanthrene	80.2	ND	68.6	86	30-150	
Pyrene	80.2	ND	42.5	53	30-150	
Quinoline	80.2	ND	38.9	48	20-112	
7,12-Dimethylbenz(a)anthracene	80.2	ND	19.3	24	30-150	F
Biphenyl	80.2	ND	66.7	83	30-150	

Column to be used to flag recovery and RPD values

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: G5_8734.D
 Lab ID: 280-36732-1 MSD Client ID: SLP10T-120612 MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2,3-Benzofuran	80.2	61.9	77	2	50	30-150	
2,3-Dihydroindene	80.2	58.9	72	3	50	30-150	
1-Methylnaphthalene	80.2	63.6	79	3	50	30-150	
2-Methylnaphthalene	80.2	63.2	79	2	50	25-95	
3-Methylcholanthrene	80.2	ND	0	NC	50	30-150	F
Acenaphthene	80.2	65.0	80	3	50	30-150	
Acenaphthylene	80.2	57.7	72	3	50	30-150	
Acridine	80.2	17.6	22	41	50	30-150	F
Anthracene	80.2	60.6	76	2	50	30-150	
Benzo[a]anthracene	80.2	13.8	17	31	50	30-150	F
Benzo[a]pyrene	80.2	3.10	4	22	50	30-150	F
Benzo[e]pyrene	80.2	3.82 J	5	12	50	37-105	F
Benzo[b]fluoranthene	80.2	5.67	7	20	50	30-150	F
Benzo(b)thiophene	80.2	63.0	79	0	50	30-150	
Benzo[k]fluoranthene	80.2	4.80	6	12	50	30-150	F
Benzo[g,h,i]perylene	80.2	2.19 J	3	26	50	30-150	F
Carbazole	80.2	65.4	82	5	50	30-150	
Chrysene	80.2	19.1	24	34	50	20-136	
Dibenz(a,h)anthracene	80.2	1.82 J	2	23	50	30-150	F
Dibenzofuran	80.2	66.5	83	3	50	30-150	
Dibenzothiophene	80.2	67.8	85	0	50	30-150	
Fluoranthene	80.2	52.3	65	18	50	30-150	
Fluorene	80.2	65.1	81	2	50	34-96	
Indene	80.2	59.3	74	3	50	22-86	
Indole	80.2	57.0	71	6	50	30-150	
Indeno[1,2,3-cd]pyrene	80.2	2.05 J	3	21	50	30-150	F
Naphthalene	80.2	65.6	79	2	50	27-95	
Perylene	80.2	ND	0	NC	50	30-150	F
Phenanthrene	80.2	69.8	87	2	50	30-150	
Pyrene	80.2	51.5	64	19	50	30-150	
Quinoline	80.2	48.2	60	21	50	20-112	
7,12-Dimethylbenz(a)anthracene	80.2	31.8	40	49	50	30-150	
Biphenyl	80.2	64.9	81	3	50	30-150	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Lab File ID: G5_8728.D Lab Sample ID: MB 280-151568/1-A
Matrix: Water Date Extracted: 12/11/2012 13:50
Instrument ID: SMS_G5 Date Analyzed: 12/20/2012 20:39
Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-151568/2-A	G5_8729.D	12/20/2012 21:14
SLP10T-120612	280-36732-1	G5_8732.D	12/20/2012 23:01
SLP10T-120612 MS	280-36732-1 MS	G5_8733.D	12/20/2012 23:37
SLP10T-120612 MSD	280-36732-1 MSD	G5_8734.D	12/21/2012 00:12
SLP10TD-120612	280-36732-2	G5_8735.D	12/21/2012 00:48
SLP10TFB-120612	280-36732-3	G5_8736.D	12/21/2012 01:24
SLP6-120612	280-36732-4	G5_8737.D	12/21/2012 01:59
W119-120612	280-36732-5	G5_8738.D	12/21/2012 02:35
W48-120612	280-36732-6	G5_8739.D	12/21/2012 03:11

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-36732-1
 SDG No.: _____
 Sample No.: ICIS 280-153241/5 Date Analyzed: 12/20/2012 17:41
 Instrument ID: SMS_G5 GC Column: Vf-5MS (30.25) ID: 0.25 (mm)
 Lab File ID (Standard): G5_8723.D Heated Purge: (Y/N) N
 Calibration ID: 12199

		ANT		PHN		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		167679	9.21	265432	11.83	315656	18.43
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-153241/9		172456	9.21	277087	11.83	320681	18.43
MB 280-151568/1-A		164016	9.21	258492	11.83	264516	18.43
LCS 280-151568/2-A		165124	9.21	264087	11.83	301013	18.43
280-36732-1	SLP10T-120612	163906	9.21	259015	11.83	269093	18.43
280-36732-1 MS	SLP10T-120612 MS	164780	9.21	264346	11.83	266357	18.43
280-36732-1 MSD	SLP10T-120612 MSD	164846	9.21	261546	11.83	263272	18.43
280-36732-2	SLP10TD-120612	161541	9.21	254744	11.83	258377	18.43
280-36732-3	SLP10TFB-120612	161331	9.21	255900	11.83	263104	18.43
280-36732-4	SLP6-120612	168902	9.21	274671	11.83	314994	18.43
280-36732-5	W119-120612	172868	9.21	281697	11.83	347352	18.43
280-36732-6	W48-120612	174582	9.21	277630	11.83	350690	18.43

ANT = Acenaphthene-d10

PHN = Phenanthrene-d10

PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area

Column used to flag values outside QC limits

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP10T-120612 Lab Sample ID: 280-36732-1

Matrix: Water Lab File ID: G5_8732.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3703.6(mL) Date Analyzed: 12/20/2012 23:01

Con. Extract Vol.: 1000(uL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.8	0.73
496-11-7	2,3-Dihydroindene	0.76	J	5.4	0.76
90-12-0	1-Methylnaphthalene	ND		6.0	0.96
91-57-6	2-Methylnaphthalene	ND		6.4	1.1
83-32-9	Acenaphthene	1.2	J	6.2	0.54
208-96-8	Acenaphthylene	ND		5.2	0.83
260-94-6	Acridine	ND		7.0	7.0
120-12-7	Anthracene	ND		4.5	0.86
56-55-3	Benzo[a]anthracene	ND		4.6	0.99
50-32-8	Benzo[a]pyrene	ND		2.7	1.3
192-97-2	Benzo[e]pyrene	ND		4.6	1.2
205-99-2	Benzo[b]fluoranthene	ND		5.1	1.5
95-15-8	Benzo(b)thiophene	ND		5.6	0.81
207-08-9	Benzo[k]fluoranthene	ND		4.4	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.7	1.3
86-74-8	Carbazole	ND		4.1	0.78
218-01-9	Chrysene	ND		6.0	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.4	1.1
132-64-9	Dibenzofuran	ND		6.2	1.1
132-65-0	Dibenzothiophene	ND		4.4	1.1
206-44-0	Fluoranthene	ND		5.0	1.8
86-73-7	Fluorene	ND		4.4	0.92
95-13-6	Indene	ND		5.1	3.5
120-72-9	Indole	ND		5.1	1.9
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.8	1.4
91-20-3	Naphthalene	2.5	J	9.3	1.2
198-55-0	Perylene	ND		4.1	4.1
85-01-8	Phenanthrene	ND		6.8	3.5
129-00-0	Pyrene	ND		4.5	1.1
91-22-5	Quinoline	ND		9.7	6.1
92-52-4	Biphenyl	ND		6.0	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP10T-120612 Lab Sample ID: 280-36732-1
Matrix: Water Lab File ID: G5_8732.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3703.6 (mL) Date Analyzed: 12/20/2012 23:01
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	84		23-84
1719-03-5	Chrysene-d12 (Surr)	15	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	88		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8732.D
 Lims ID: 280-36732-J-1-A Client ID: SLP10T-120612
 Inject. Date: 20-Dec-2012 23:01:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-014
 Misc. Info.: 280-36732-j-1-a =280-36732-J-1-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 13
 Lims Batch ID: 153241 Lims Sample ID: 14
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:09:52

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	163906	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	259015	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	269093	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	124734	262.9	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	60018	251.9	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	15882	44.4	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	848	2.83	
11 Naphthalene	128	6.114	6.114	0.0	1	4467	9.14	
14 Indole	117	7.157	7.157	0.0	1	539	1.99	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	763	2.39	
18 Acenaphthylene	152	8.948	8.948	0.0	2	647	1.70	
19 Acenaphthene	154	9.273	9.273	0.0	4	1183	4.47	
20 Dibenzofuran	168	9.590	9.590	0.0	1	1420	3.70	
23 Phenanthrene	178	11.862	11.862	0.0	1	2830	6.59	
27 Fluoranthene	202	13.874	13.870	0.004	1	808	2.13	
28 Pyrene	202	14.252	14.248	0.004	6	521	1.23	
30 Chrysene	228	16.282	16.282	0.0	1	567	1.38	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	1297	3.49	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	1211	2.71	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	588	1.59	
36 Benzo[a]pyrene	252	18.346	18.352	-0.006	1	936	2.77	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	718	2.22	
44 Benzo[g,h,i]perylene	276	20.430	20.436	-0.006	1	848	2.48	
S 48 Benzofluoranthene	1				0		6.19	

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8732.D

Injection Date: 20-Dec-2012 23:01:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10T-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 14

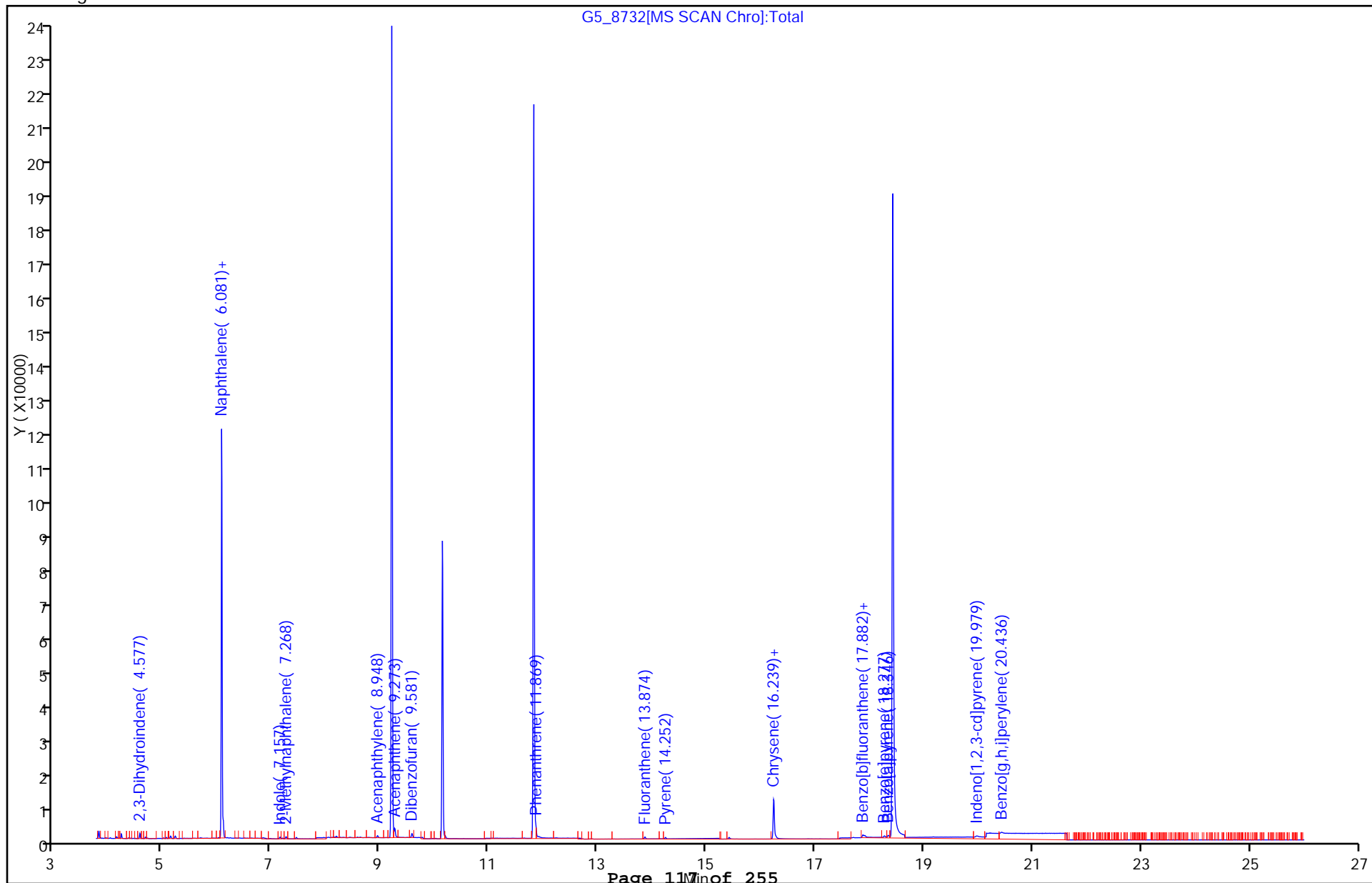
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8732.D

Injection Date: 20-Dec-2012 23:01:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10T-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 14

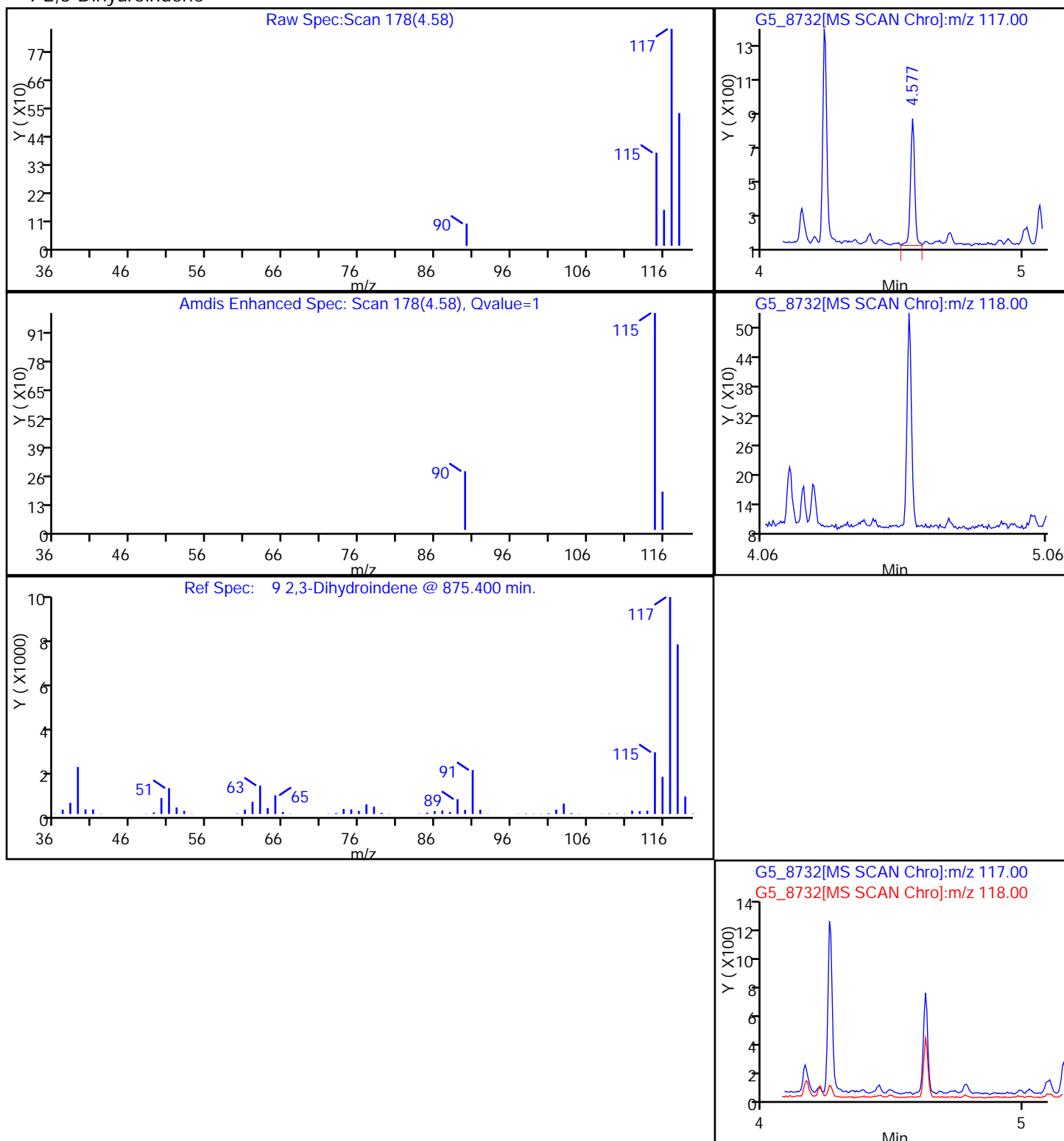
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

9 2,3-Dihydroindene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8732.D

Injection Date: 20-Dec-2012 23:01:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10T-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 14

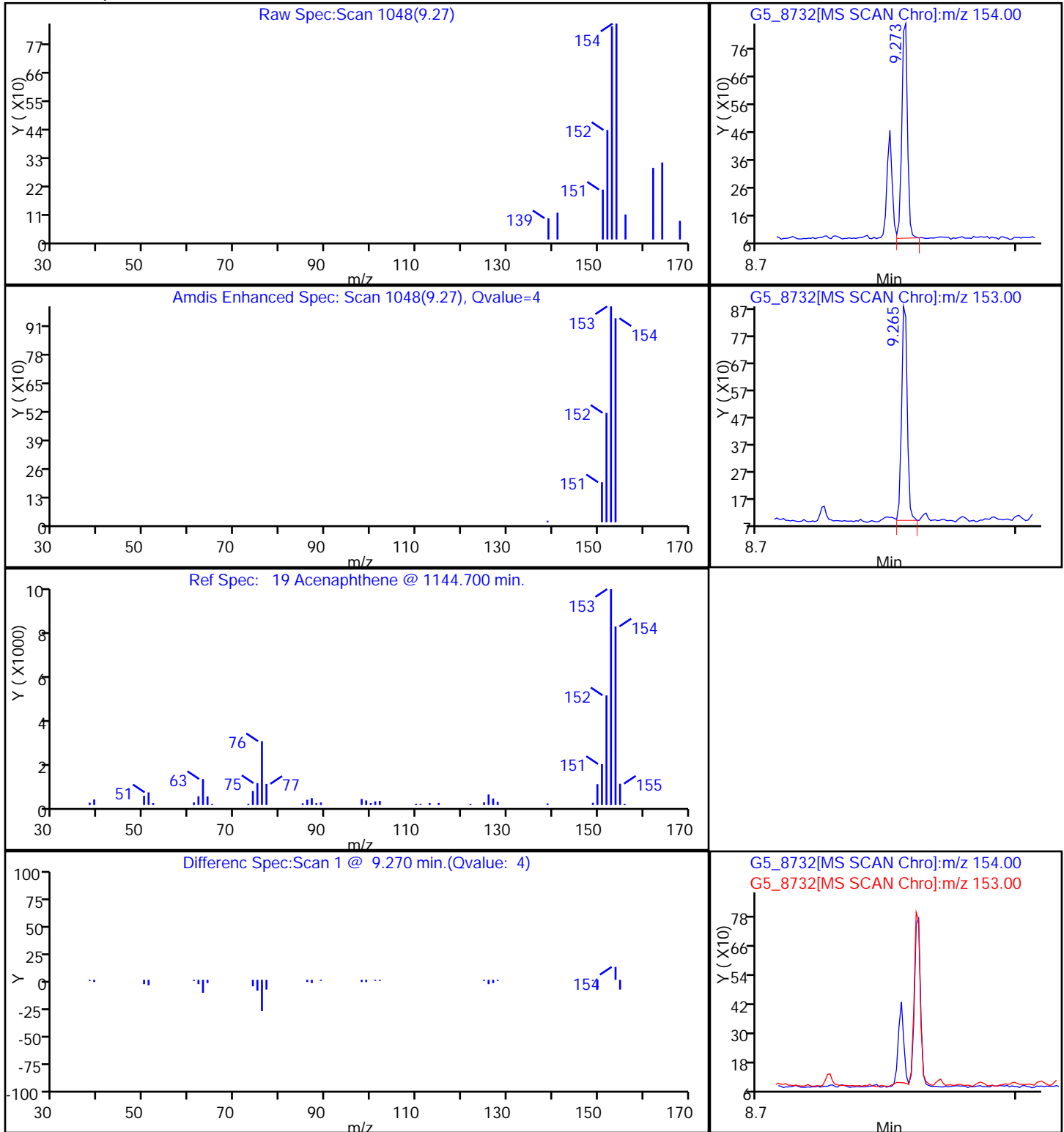
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

19 Acenaphthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8732.D

Injection Date: 20-Dec-2012 23:01:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10T-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 14

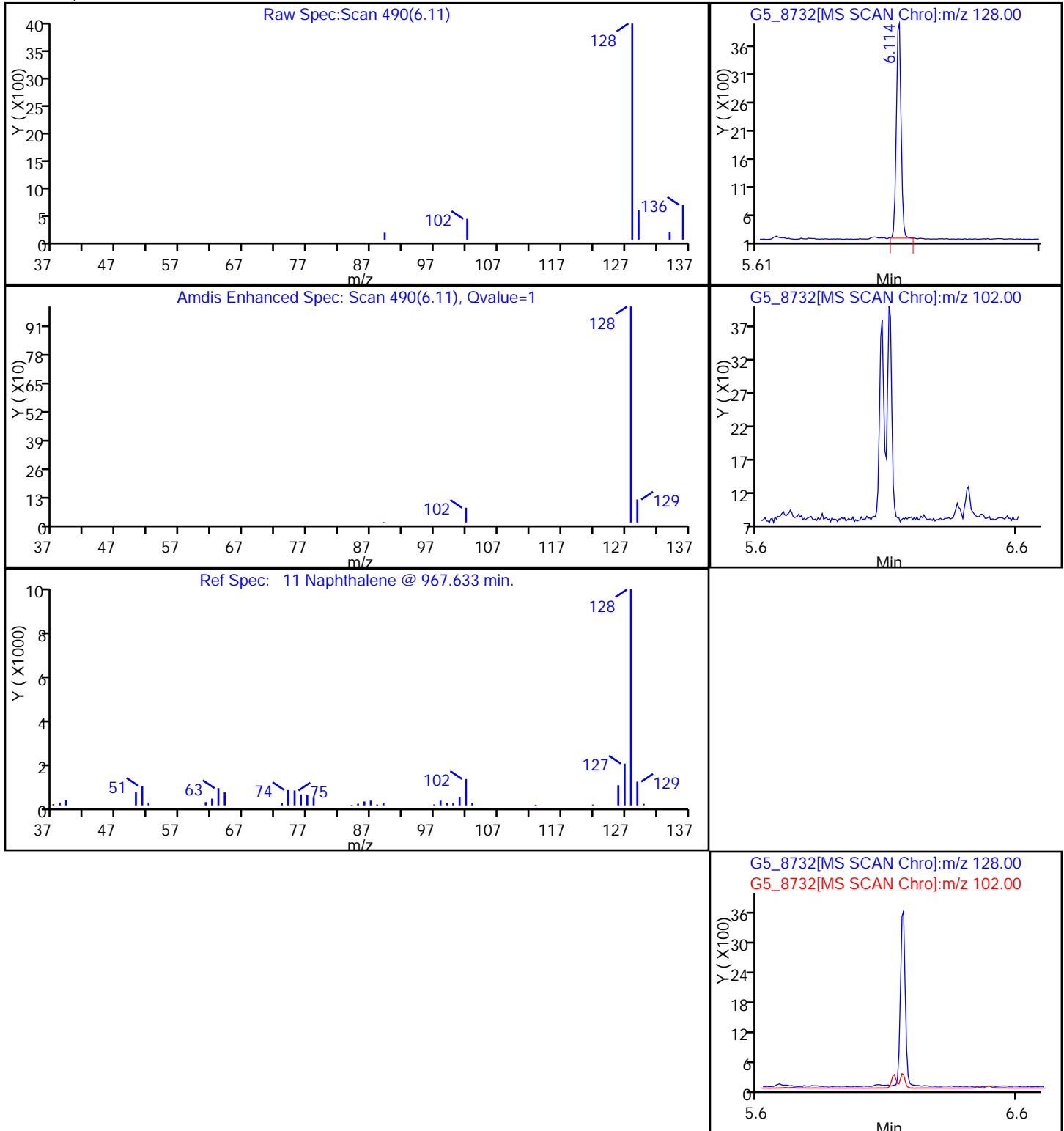
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

11 Naphthalene



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP10TD-120612 Lab Sample ID: 280-36732-2

Matrix: Water Lab File ID: G5_8735.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3875.1 (mL) Date Analyzed: 12/21/2012 00:48

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.6	0.70
496-11-7	2,3-Dihydroindene	ND		5.2	0.72
90-12-0	1-Methylnaphthalene	ND		5.8	0.92
91-57-6	2-Methylnaphthalene	ND		6.1	1.0
83-32-9	Acenaphthene	ND		5.9	0.52
208-96-8	Acenaphthylene	ND		5.0	0.79
260-94-6	Acridine	ND		6.7	6.7
120-12-7	Anthracene	ND		4.3	0.83
56-55-3	Benzo[a]anthracene	ND		4.4	0.95
50-32-8	Benzo[a]pyrene	ND		2.6	1.3
192-97-2	Benzo[e]pyrene	ND		4.4	1.2
205-99-2	Benzo[b]fluoranthene	ND		4.9	1.4
95-15-8	Benzo(b)thiophene	ND		5.4	0.77
207-08-9	Benzo[k]fluoranthene	ND		4.2	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.4	1.2
86-74-8	Carbazole	ND		3.9	0.74
218-01-9	Chrysene	ND		5.8	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.1	1.1
132-64-9	Dibenzofuran	ND		5.9	1.0
132-65-0	Dibenzothiophene	ND		4.2	1.0
206-44-0	Fluoranthene	ND		4.7	1.7
86-73-7	Fluorene	ND		4.2	0.88
95-13-6	Indene	ND		4.9	3.4
120-72-9	Indole	ND		4.9	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.6	1.3
91-20-3	Naphthalene	1.3	J	8.9	1.2
198-55-0	Perylene	ND		3.9	3.9
85-01-8	Phenanthrene	ND		6.5	3.3
129-00-0	Pyrene	ND		4.3	1.0
91-22-5	Quinoline	ND		9.3	5.8
92-52-4	Biphenyl	ND		5.8	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP10TD-120612 Lab Sample ID: 280-36732-2
Matrix: Water Lab File ID: G5_8735.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3875.1 (mL) Date Analyzed: 12/21/2012 00:48
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	83		23-84
1719-03-5	Chrysene-d12 (Surr)	16	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	89		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8735.D
 Lims ID: 280-36732-B-2-A Client ID: SLP10TD-120612
 Inject. Date: 21-Dec-2012 00:48:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-017
 Misc. Info.: 280-36732-b-2-a =280-36732-B-2-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 16
 Lims Batch ID: 153241 Lims Sample ID: 17
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:11:33

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	161541	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	-0.001	1	254744	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	258377	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	125506	268.4	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	58396	249.2	
\$ 6 Chrysene-d12 (Surr)	240	16.244	16.239	0.005	1	16421	47.8	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	551	1.87	
11 Naphthalene	128	6.108	6.114	-0.006	1	2347	4.87	
14 Indole	117	7.156	7.157	-0.001	1	540	2.03	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	547	1.74	
23 Phenanthrene	178	11.862	11.862	0.0	1	1231	2.91	
27 Fluoranthene	202	13.870	13.870	0.0	1	553	1.48	
30 Chrysene	228	16.282	16.282	0.0	1	971	2.47	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	1690	4.73	
34 Benzo[k]fluoranthene	252	17.919	17.920	-0.001	1	1554	3.62	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	707	1.99	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	943	2.91	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	958	3.08	
44 Benzo[g,h,i]perylene	276	20.435	20.436	-0.001	1	1006	3.06	

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8735.D

Injection Date: 21-Dec-2012 00:48:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TD-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 17

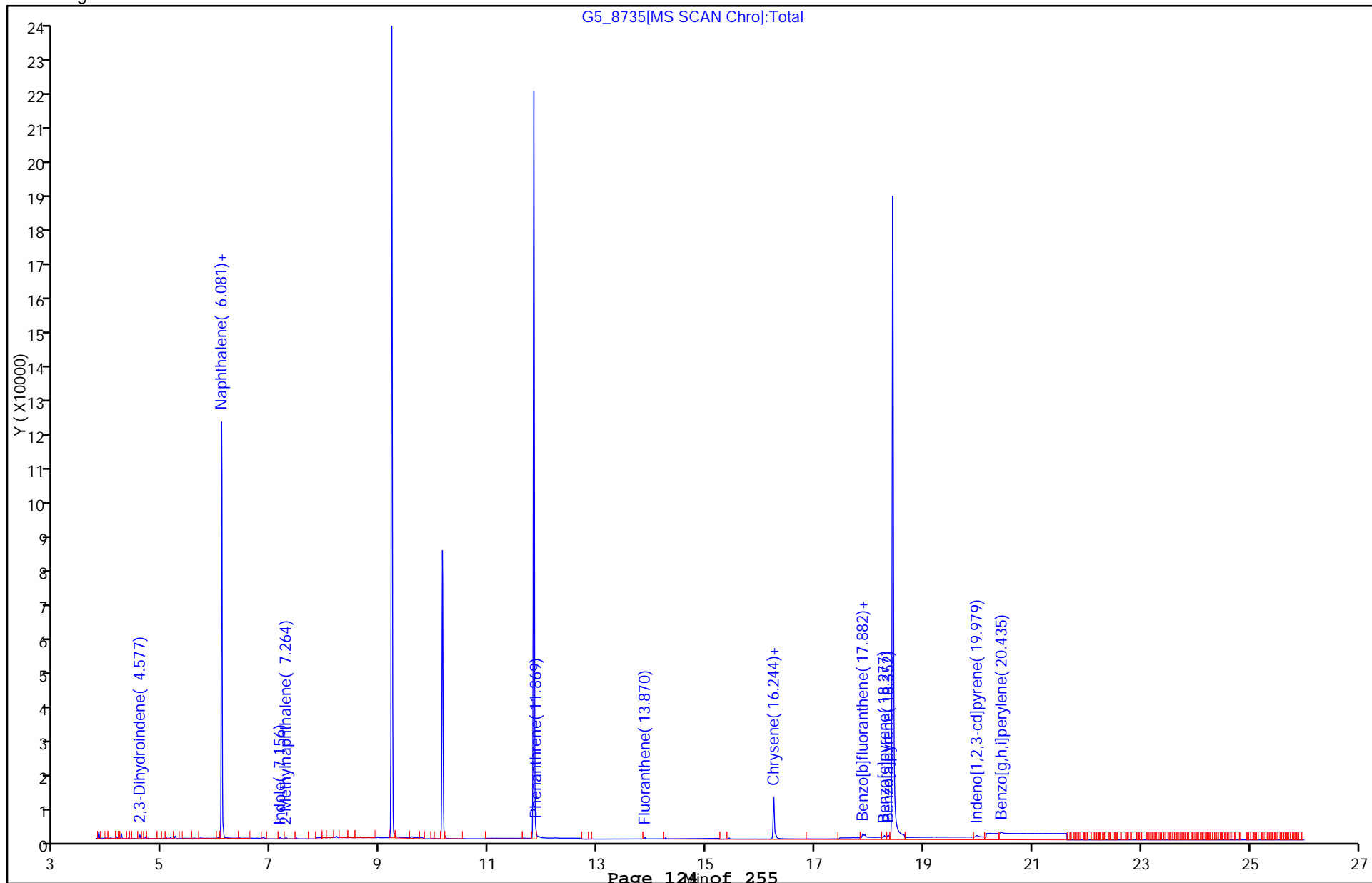
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8735.D

Injection Date: 21-Dec-2012 00:48:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TD-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 17

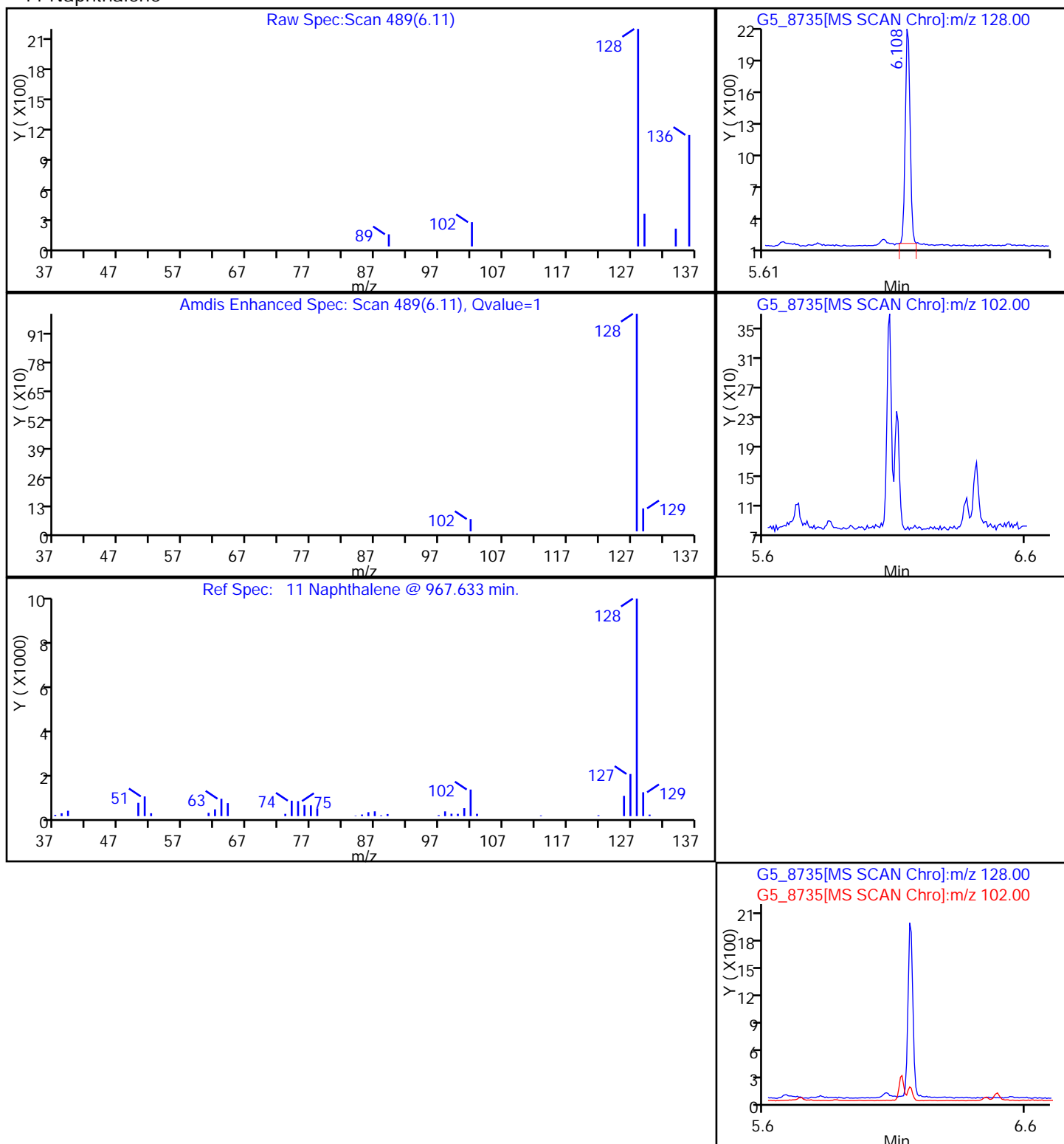
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

11 Naphthalene



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP10TFB-120612 Lab Sample ID: 280-36732-3

Matrix: Water Lab File ID: G5_8736.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3766.2 (mL) Date Analyzed: 12/21/2012 01:24

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.7	0.72
496-11-7	2,3-Dihydroindene	ND		5.3	0.74
90-12-0	1-Methylnaphthalene	ND		5.9	0.95
91-57-6	2-Methylnaphthalene	1.1	J	6.3	1.0
83-32-9	Acenaphthene	0.77	J	6.1	0.53
208-96-8	Acenaphthylene	ND		5.1	0.82
260-94-6	Acridine	ND		6.9	6.9
120-12-7	Anthracene	ND		4.5	0.85
56-55-3	Benzo[a]anthracene	ND		4.6	0.98
50-32-8	Benzo[a]pyrene	ND		2.7	1.3
192-97-2	Benzo[e]pyrene	ND		4.6	1.2
205-99-2	Benzo[b]fluoranthene	ND		5.0	1.5
95-15-8	Benzo(b)thiophene	ND		5.5	0.80
207-08-9	Benzo[k]fluoranthene	ND		4.4	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.6	1.2
86-74-8	Carbazole	ND		4.0	0.76
218-01-9	Chrysene	ND		5.9	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.3	1.1
132-64-9	Dibenzofuran	ND		6.1	1.1
132-65-0	Dibenzothiophene	ND		4.4	1.0
206-44-0	Fluoranthene	ND		4.9	1.8
86-73-7	Fluorene	ND		4.4	0.90
95-13-6	Indene	ND		5.0	3.5
120-72-9	Indole	ND		5.0	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.7	1.3
91-20-3	Naphthalene	3.0	J	9.1	1.2
198-55-0	Perylene	ND		4.0	4.0
85-01-8	Phenanthrene	ND		6.7	3.4
129-00-0	Pyrene	ND		4.5	1.1
91-22-5	Quinoline	ND		9.6	6.0
92-52-4	Biphenyl	ND		5.9	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP10TFB-120612 Lab Sample ID: 280-36732-3
Matrix: Water Lab File ID: G5_8736.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3766.2 (mL) Date Analyzed: 12/21/2012 01:24
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	74		23-84
1719-03-5	Chrysene-d12 (Surr)	85		28-101
1146-65-2	Naphthalene-d8 (Surr)	79		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8736.D
 Lims ID: 280-36732-E-3-A Client ID: SLP10TFB-120612
 Inject. Date: 21-Dec-2012 01:24:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-018
 Misc. Info.: 280-36732-e-3-a =280-36732-E-3-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 17
 Lims Batch ID: 153241 Lims Sample ID: 18
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:11:55

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	161331	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	255900	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	263104	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	110712	237.0	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	52380	222.5	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	89248	255.0	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	647	2.19	
11 Naphthalene	128	6.114	6.114	0.0	1	5358	11.1	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	1296	4.12	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	905	3.15	
18 Acenaphthylene	152	8.948	8.948	0.0	2	737	1.97	
19 Acenaphthene	154	9.265	9.273	-0.009	4	755	2.90	
20 Dibenzofuran	168	9.590	9.590	0.0	1	1271	3.37	
21 Fluorene	166	10.192	10.198	-0.006	1	758	2.55	
23 Phenanthrene	178	11.862	11.862	0.0	1	1792	4.22	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	1083	2.98	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	760	1.74	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	539	1.49	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	861	2.61	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	597	1.89	
44 Benzo[g,h,i]perylene	276	20.435	20.436	-0.001	1	776	2.32	

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8736.D

Injection Date: 21-Dec-2012 01:24:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TFB-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 18

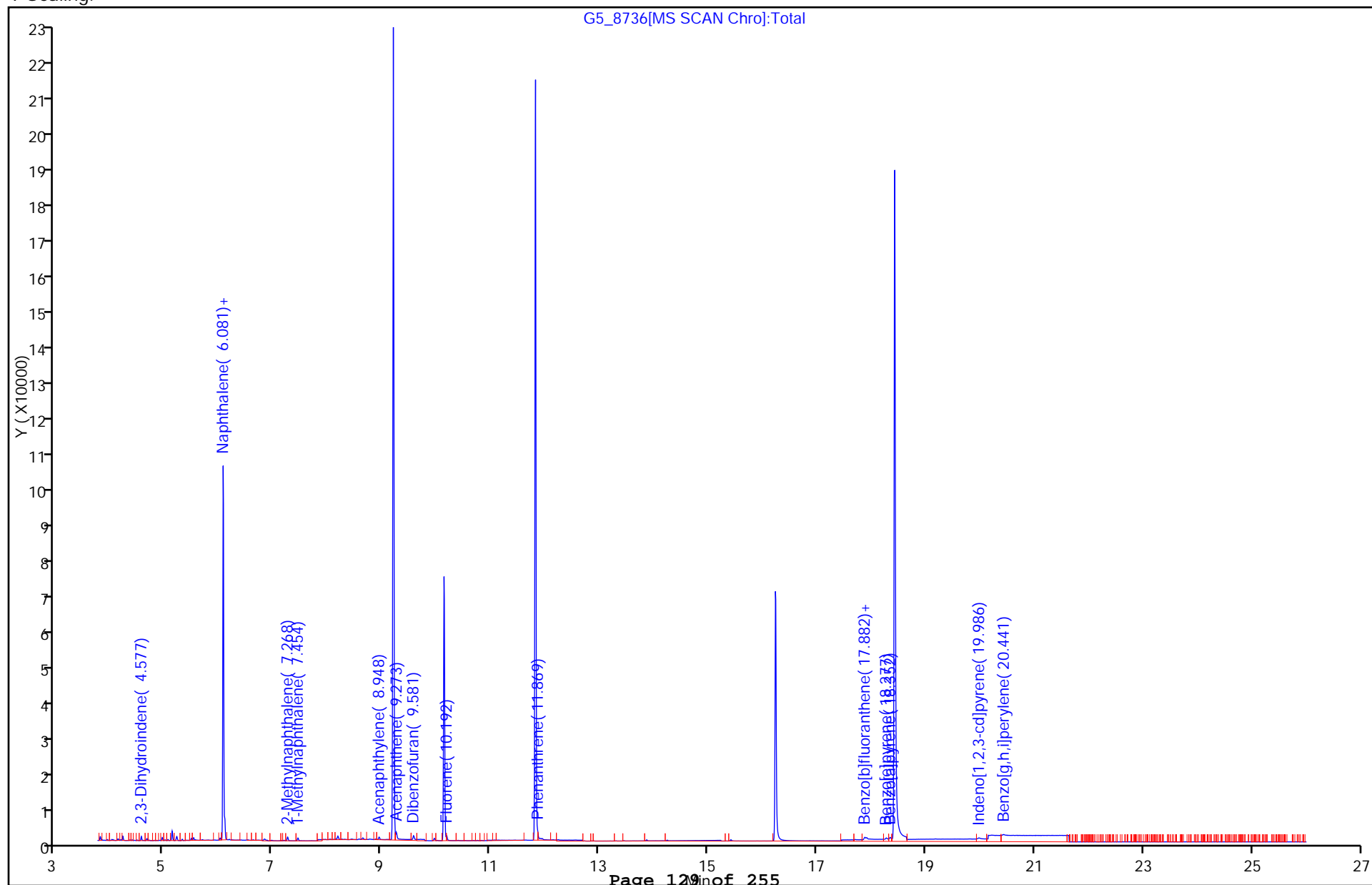
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8736.D

Injection Date: 21-Dec-2012 01:24:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TFB-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 18

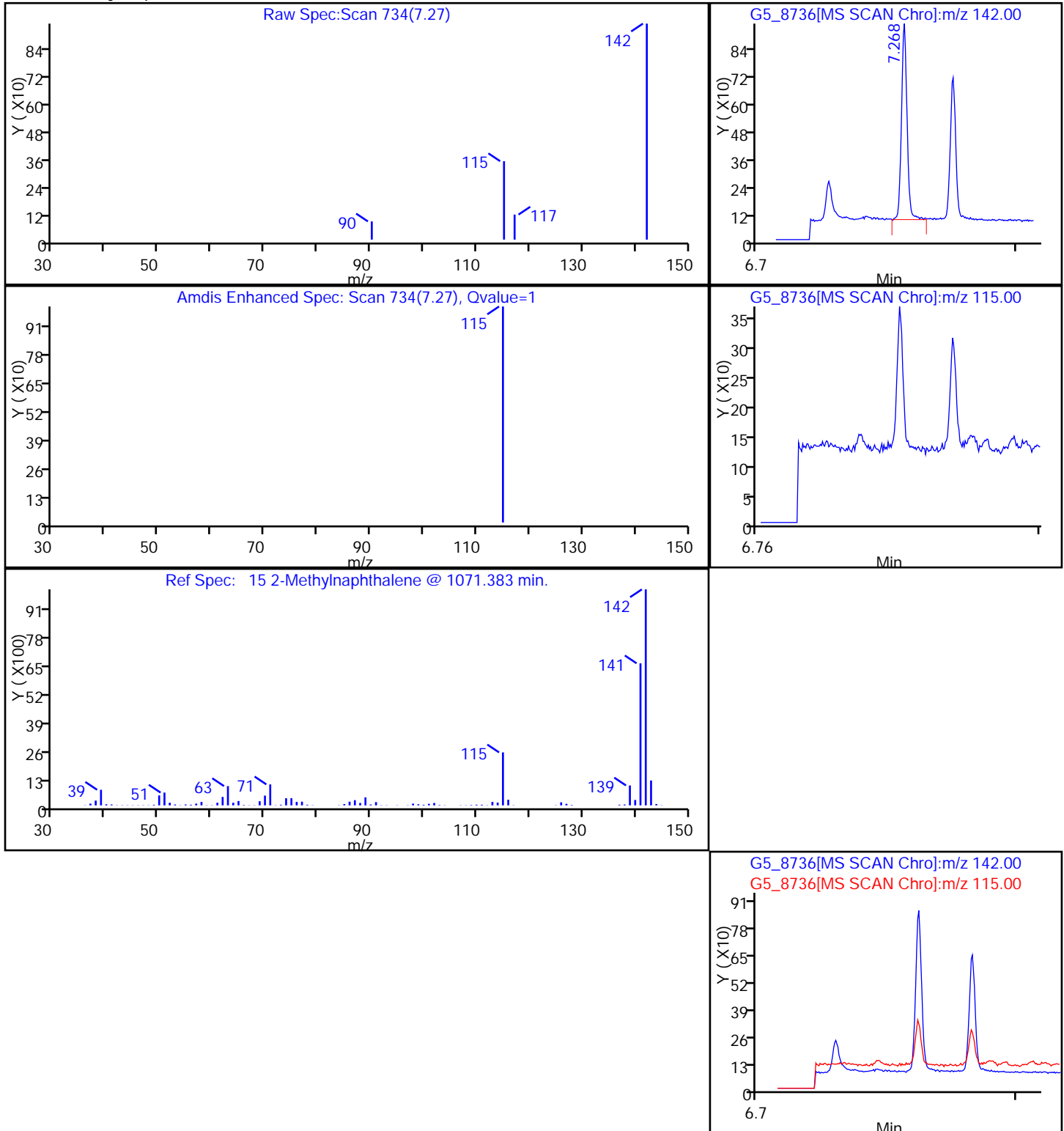
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

15 2-Methylnaphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8736.D

Injection Date: 21-Dec-2012 01:24:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TFB-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 18

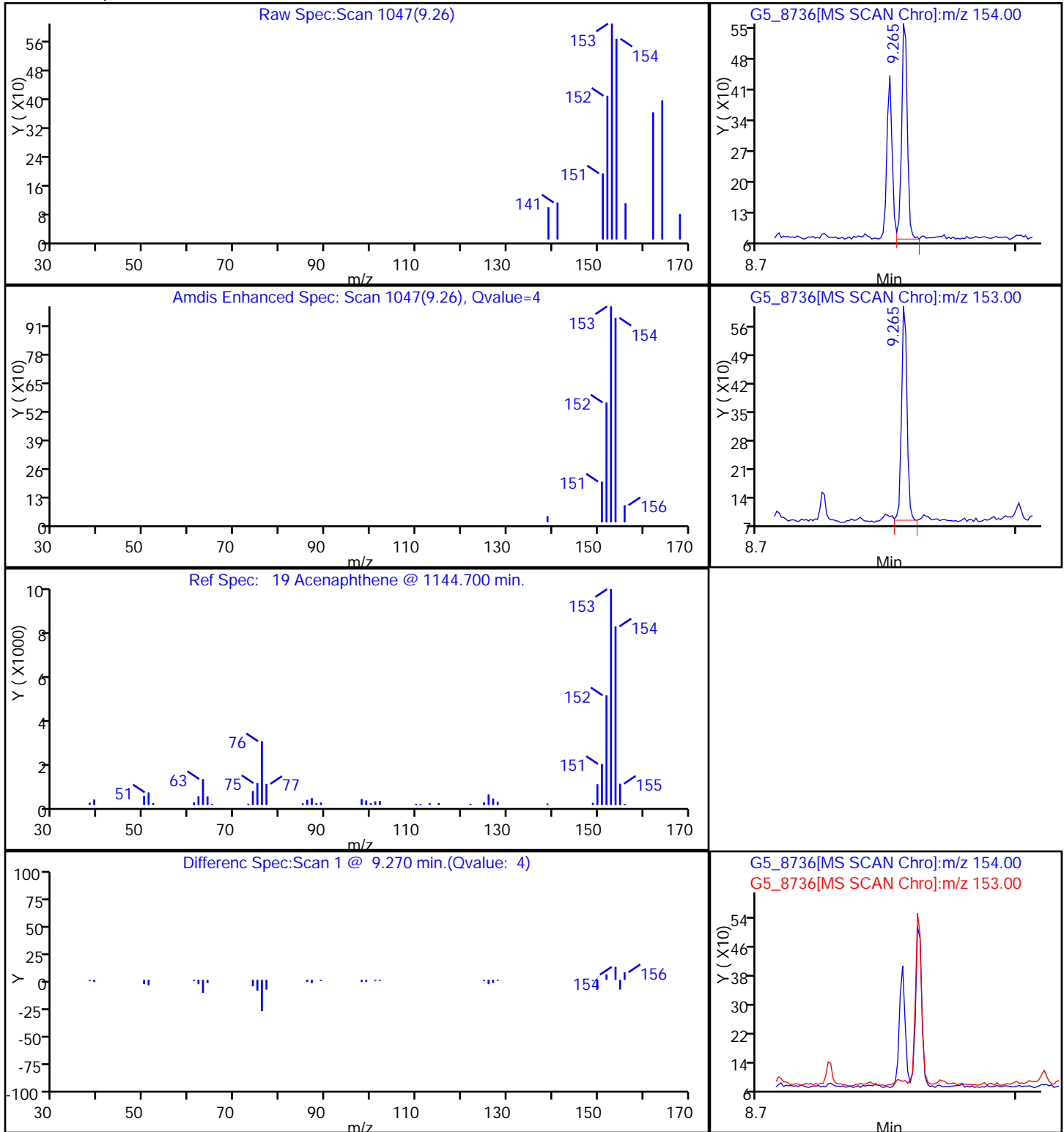
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

19 Acenaphthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8736.D

Injection Date: 21-Dec-2012 01:24:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TFB-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 18

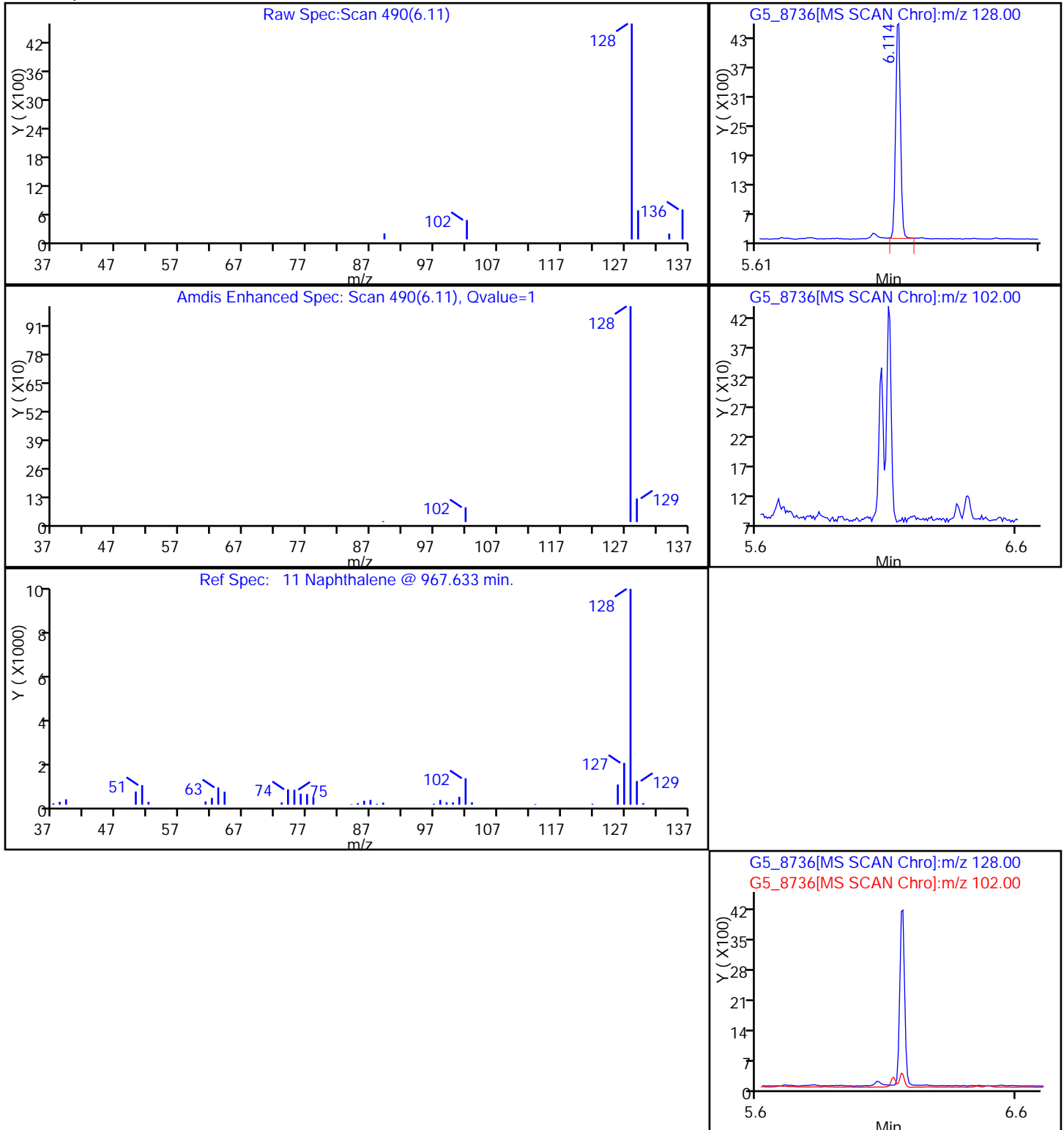
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

11 Naphthalene



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP6-120612 Lab Sample ID: 280-36732-4

Matrix: Water Lab File ID: G5_8737.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 12:00

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3749.9(mL) Date Analyzed: 12/21/2012 01:59

Con. Extract Vol.: 1000(uL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.8	0.73
496-11-7	2,3-Dihydroindene	41		5.3	0.75
90-12-0	1-Methylnaphthalene	1.3	J	6.0	0.95
91-57-6	2-Methylnaphthalene	ND		6.3	1.0
83-32-9	Acenaphthene	56		6.1	0.53
208-96-8	Acenaphthylene	6.1		5.1	0.82
260-94-6	Acridine	ND		6.9	6.9
120-12-7	Anthracene	1.7	J	4.5	0.85
56-55-3	Benzo[a]anthracene	ND		4.6	0.98
50-32-8	Benzo[a]pyrene	ND		2.7	1.3
192-97-2	Benzo[e]pyrene	ND		4.6	1.2
205-99-2	Benzo[b]fluoranthene	ND		5.0	1.5
95-15-8	Benzo(b)thiophene	7.5		5.5	0.80
207-08-9	Benzo[k]fluoranthene	ND		4.4	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.6	1.2
86-74-8	Carbazole	1.7	J	4.1	0.77
218-01-9	Chrysene	ND		6.0	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.3	1.1
132-64-9	Dibenzofuran	ND		6.1	1.1
132-65-0	Dibenzothiophene	1.4	J	4.4	1.0
206-44-0	Fluoranthene	1.9	J B	4.9	1.8
86-73-7	Fluorene	0.94	J	4.4	0.91
95-13-6	Indene	5.3		5.0	3.5
120-72-9	Indole	ND		5.0	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.8	1.3
91-20-3	Naphthalene	4.1	J	9.2	1.2
198-55-0	Perylene	ND		4.1	4.1
85-01-8	Phenanthrene	ND		6.7	3.4
129-00-0	Pyrene	3.0	J B	4.5	1.1
91-22-5	Quinoline	ND		9.6	6.0
92-52-4	Biphenyl	ND		6.0	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP6-120612 Lab Sample ID: 280-36732-4
Matrix: Water Lab File ID: G5_8737.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 12:00
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3749.9 (mL) Date Analyzed: 12/21/2012 01:59
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	58		23-84
1719-03-5	Chrysene-d12 (Surr)	13	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	60		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D
 Lims ID: 280-36732-E-4-A Client ID: SLP6-120612
 Inject. Date: 21-Dec-2012 01:59:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-019
 Misc. Info.: 280-36732-e-4-a =280-36732-E-4-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 18
 Lims Batch ID: 153241 Lims Sample ID: 19
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:12:44

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	168902	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	274671	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	314994	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	87580	179.1	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	44169	174.8	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	15805	37.7	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	567	2.38	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	46887	151.9	
10 Indene	116	4.682	4.682	0.0	1	6019	19.8	
11 Naphthalene	128	6.109	6.114	-0.005	1	7726	15.3	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	12818	28.3	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	1055	3.21	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	1486	4.94	
18 Acenaphthylene	152	8.948	8.948	0.0	2	8976	23.0	
19 Acenaphthene	154	9.265	9.273	-0.008	5	57610	211.4	
20 Dibenzofuran	168	9.581	9.590	-0.009	1	879	2.22	
21 Fluorene	166	10.192	10.198	-0.006	1	1119	3.51	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	2009	5.26	
23 Phenanthrene	178	11.862	11.862	0.0	1	3285	7.21	
24 Anthracene	178	11.947	11.947	0.0	1	2449	6.49	
25 Acridine	179	12.011	12.019	-0.007	1	3355	13.5	M
26 Carbazole	167	12.246	12.246	0.0	1	2340	6.52	
27 Fluoranthene	202	13.870	13.870	0.0	1	2808	6.97	
28 Pyrene	202	14.248	14.248	0.0	6	4957	11.1	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	508	1.53	
30 Chrysene	228	16.282	16.282	0.0	1	863	1.80	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	1774	4.07	
34 Benzo[k]fluoranthene	252	17.913	17.920	-0.007	1	1720	3.29	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	782	1.81	
36 Benzo[a]pyrene	252	18.346	18.352	-0.006	1	1424	3.60	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
37 Perylene	252	18.434	18.465	-0.031	1	968	1.99	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	867	2.29	
44 Benzo[g,h,i]perylene	276	20.430	20.436	-0.006	1	1041	2.60	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

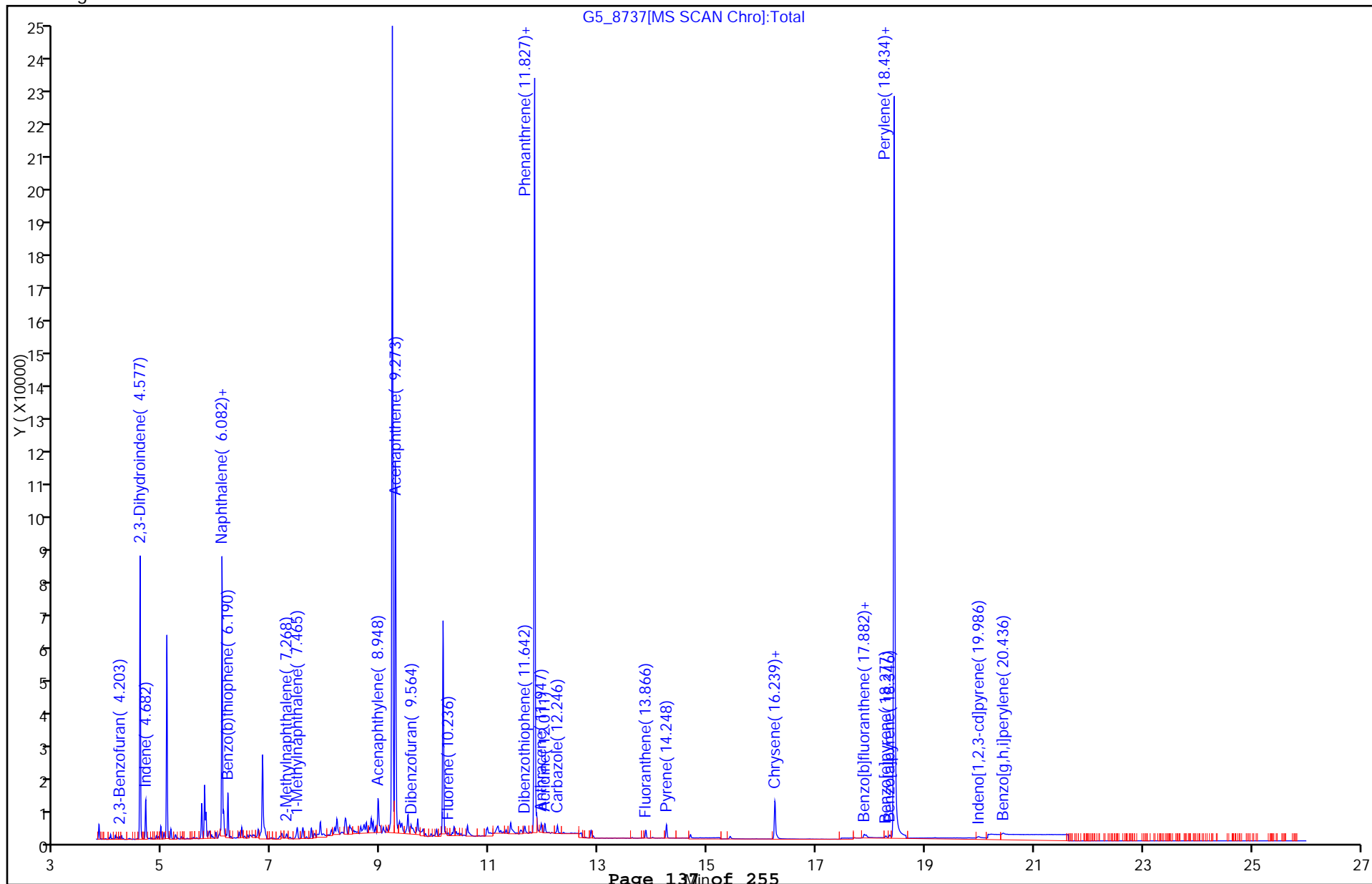
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

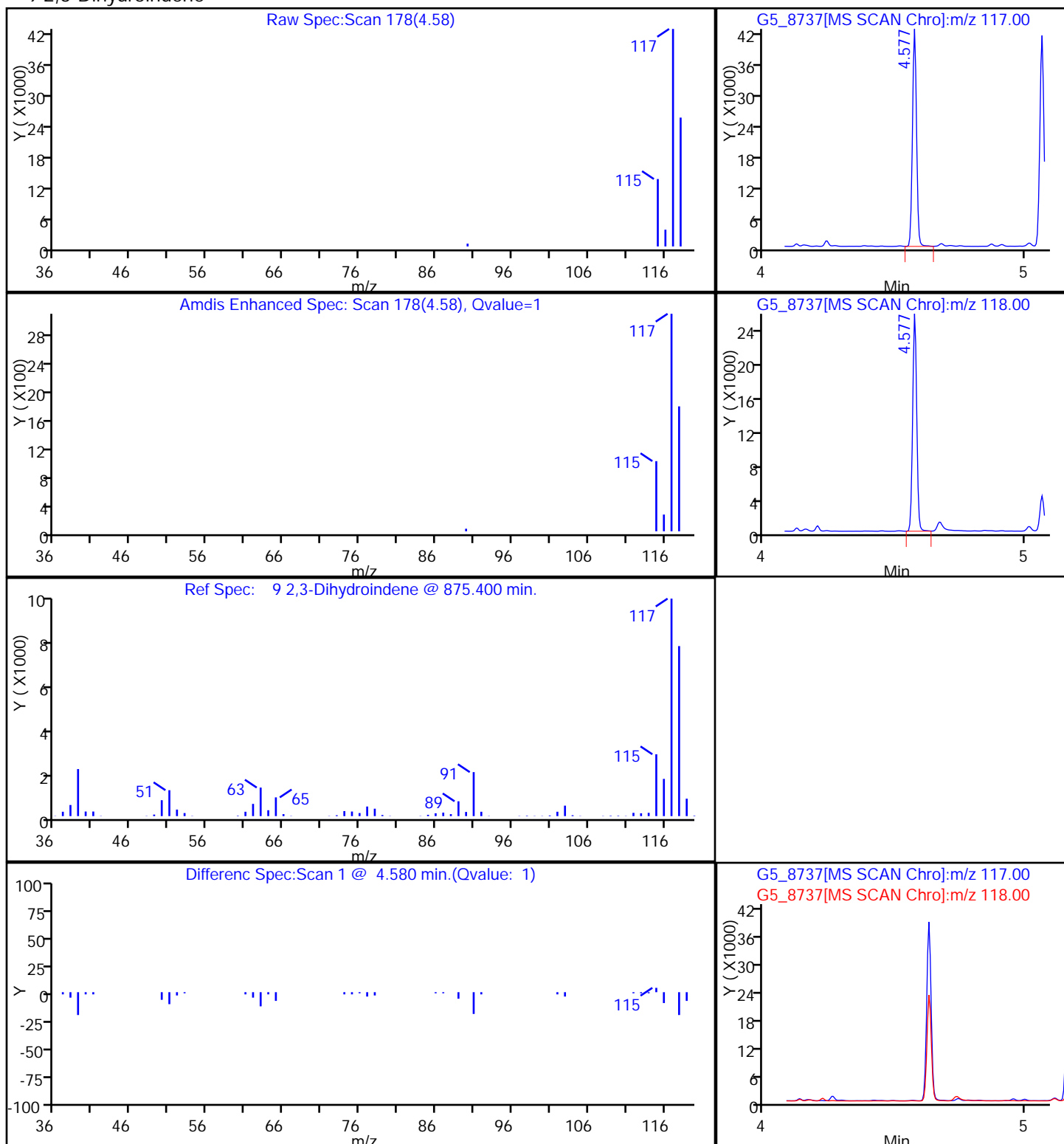
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

9 2,3-Dihydroindene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

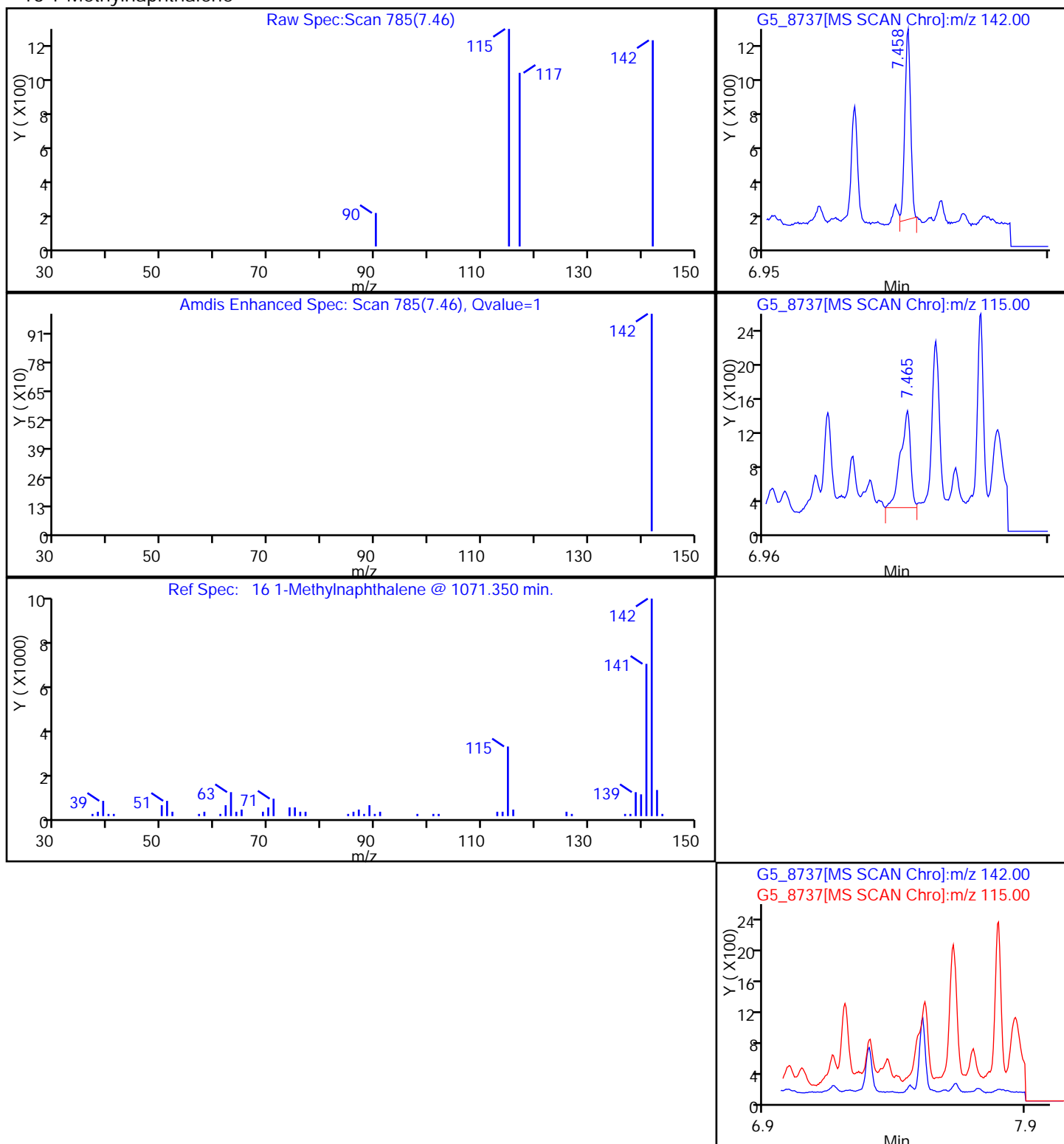
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

16 1-Methylnaphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

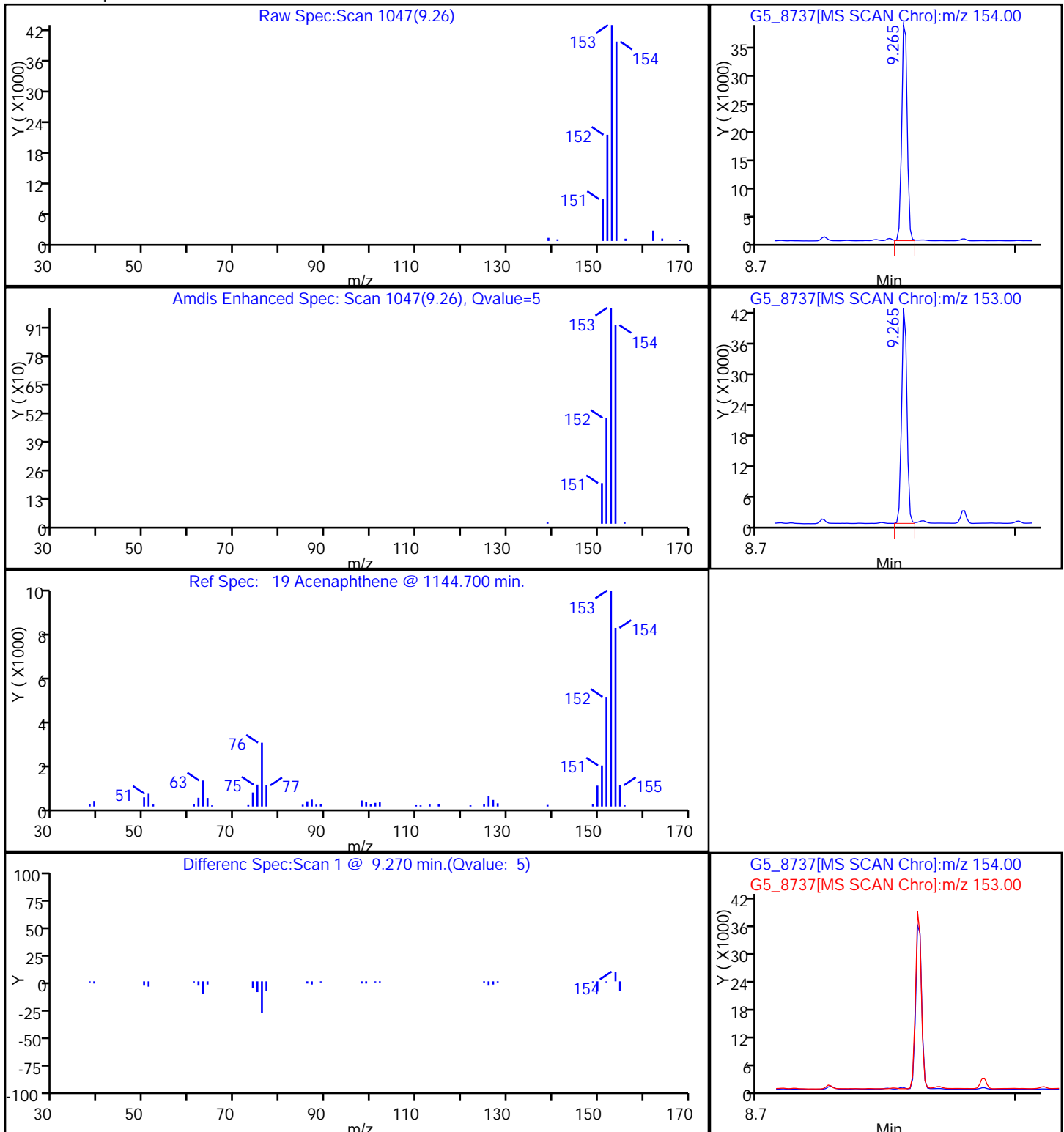
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

19 Acenaphthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

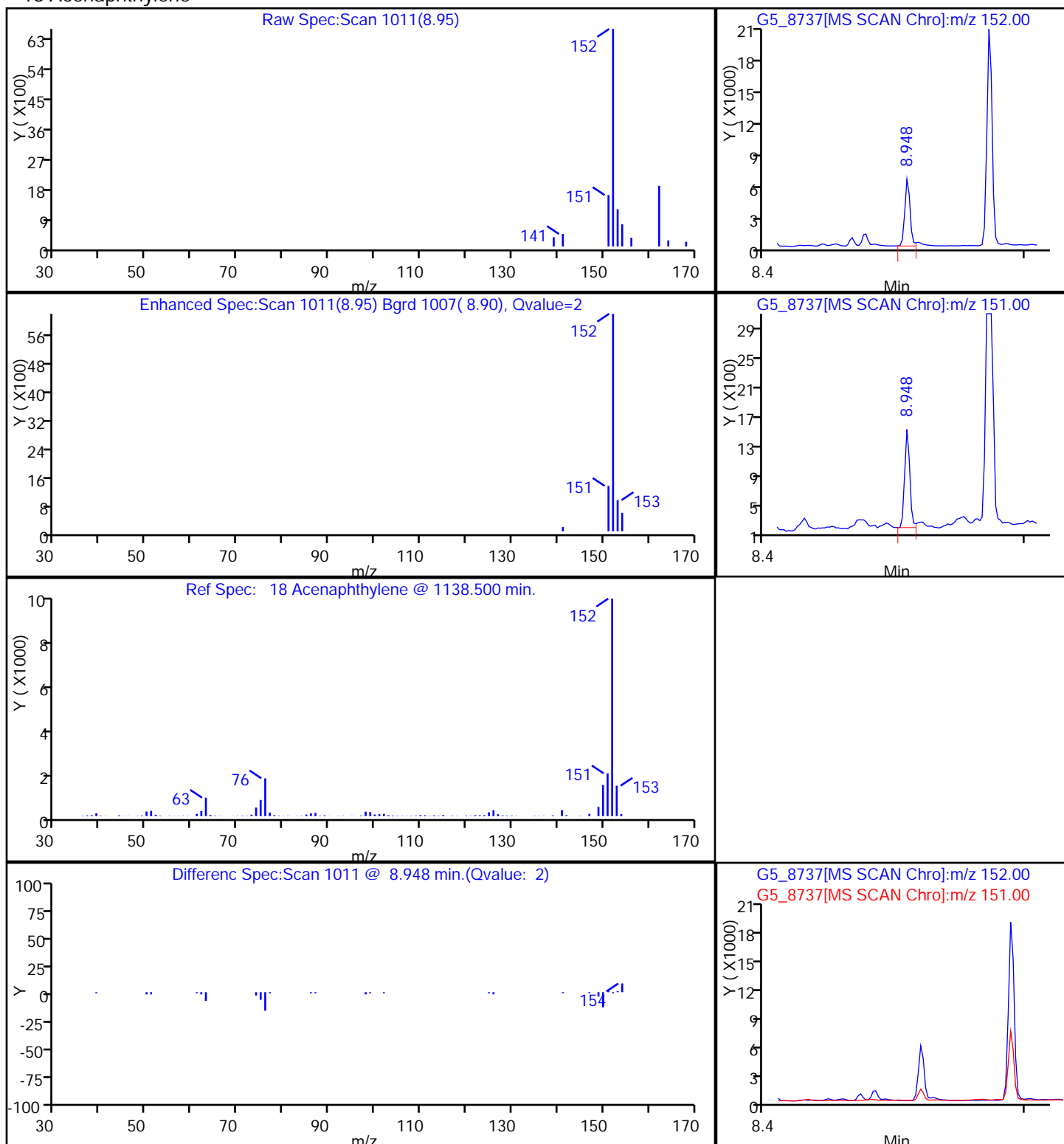
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

18 Acenaphthylene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

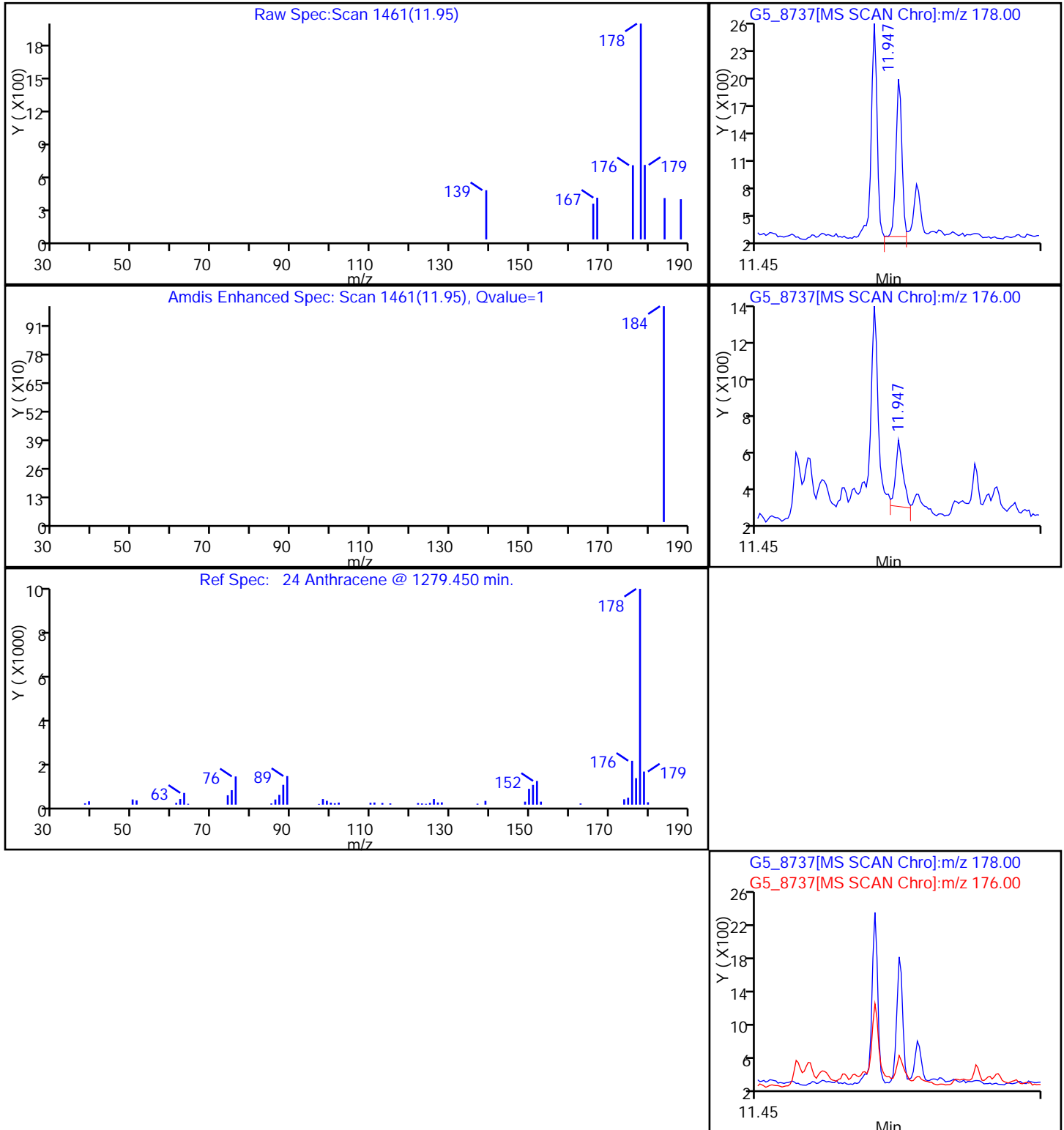
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

24 Anthracene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

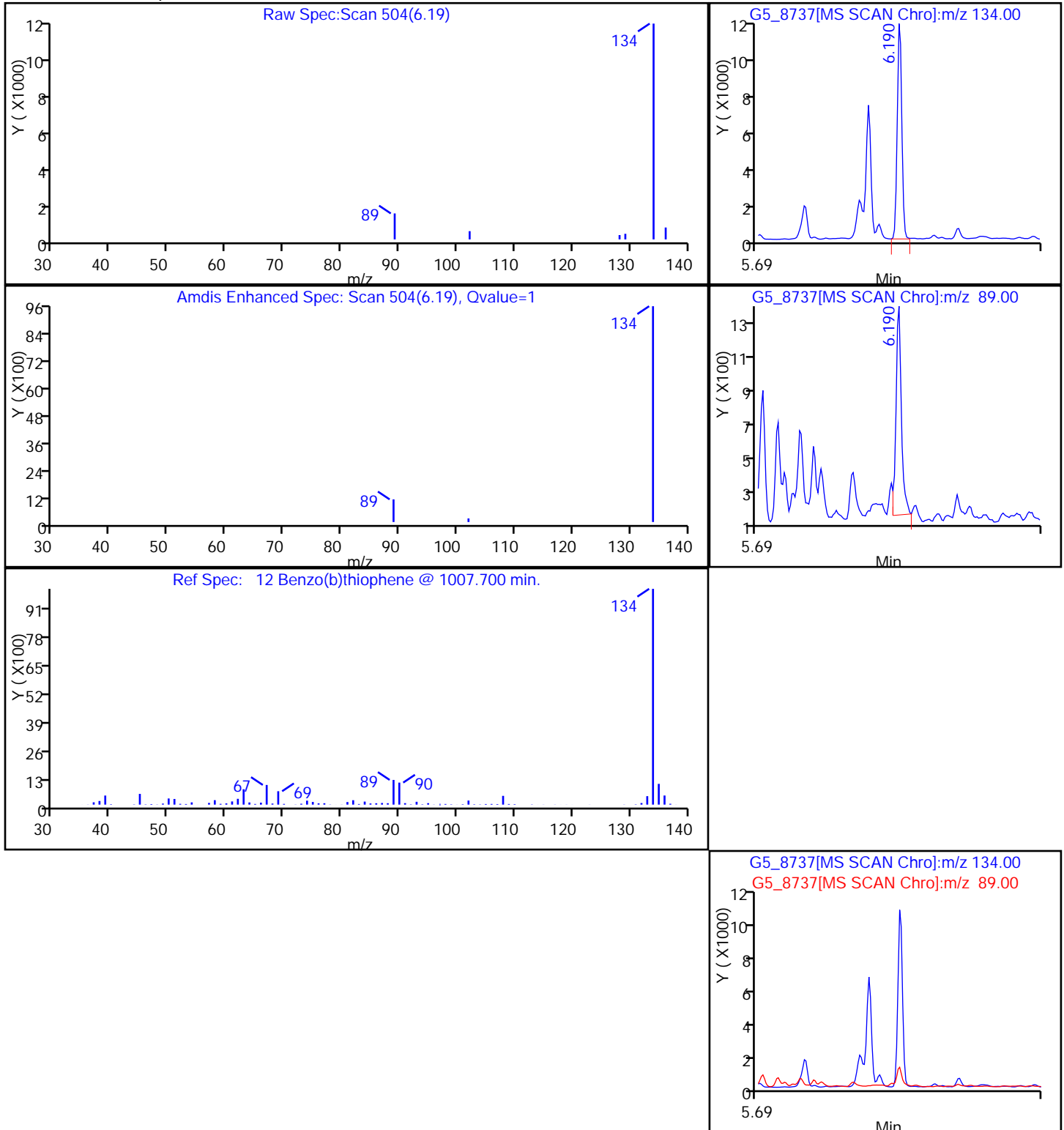
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

12 Benzo(b)thiophene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

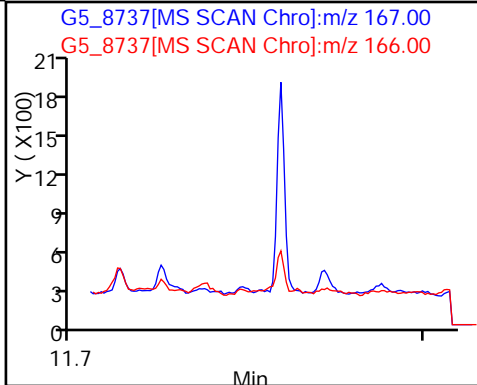
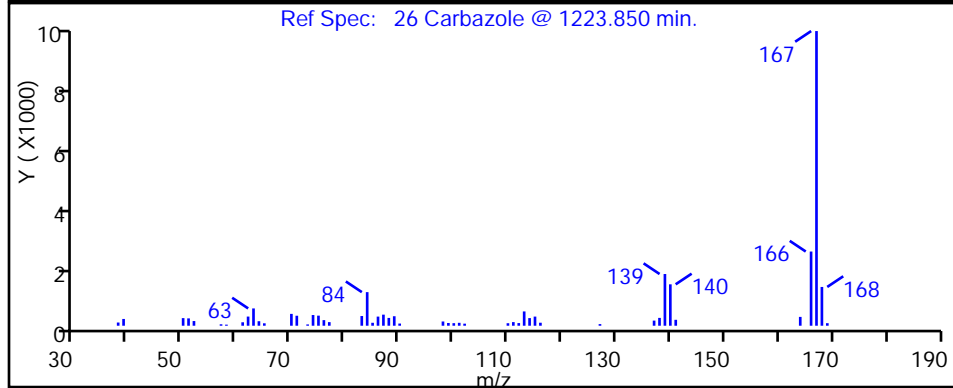
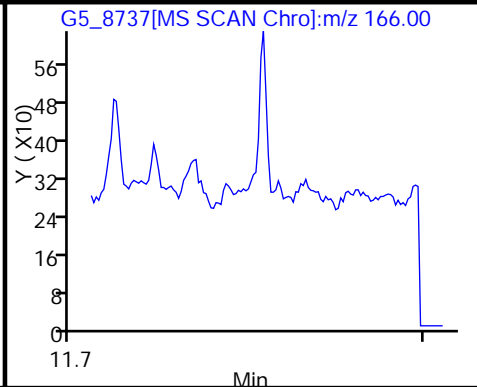
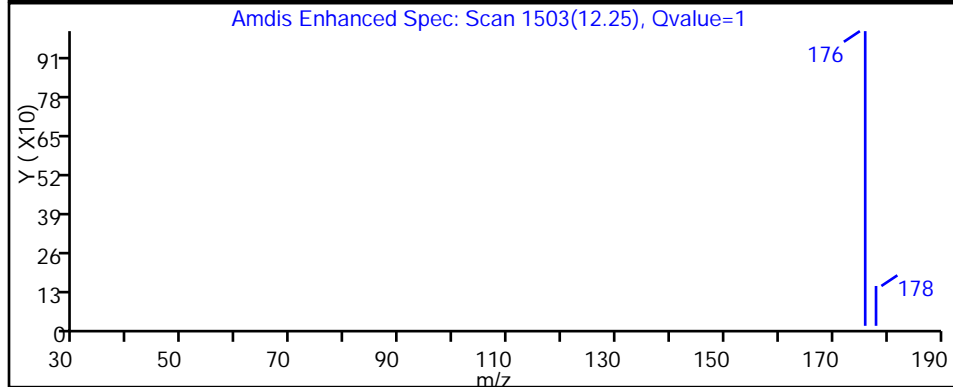
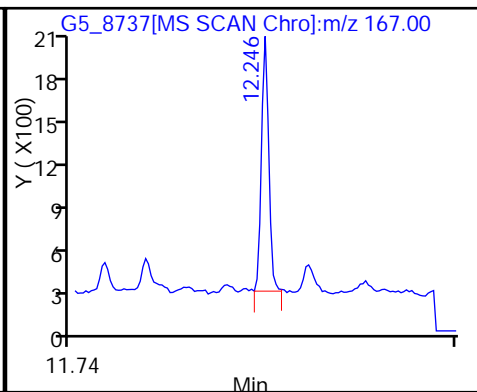
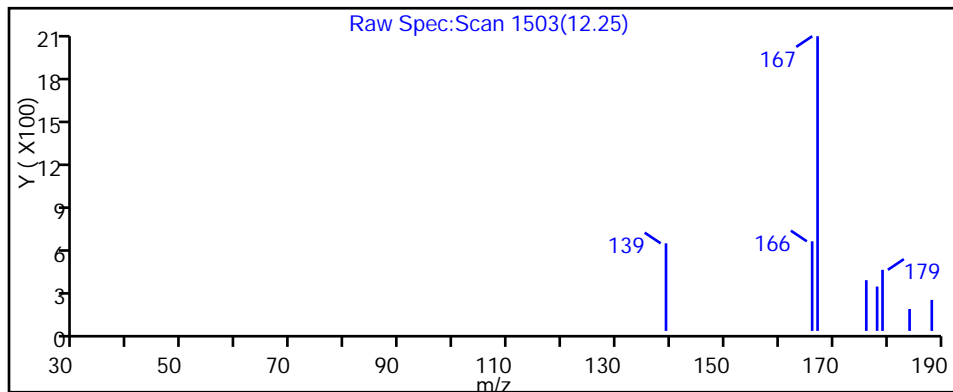
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

26 Carbazole



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

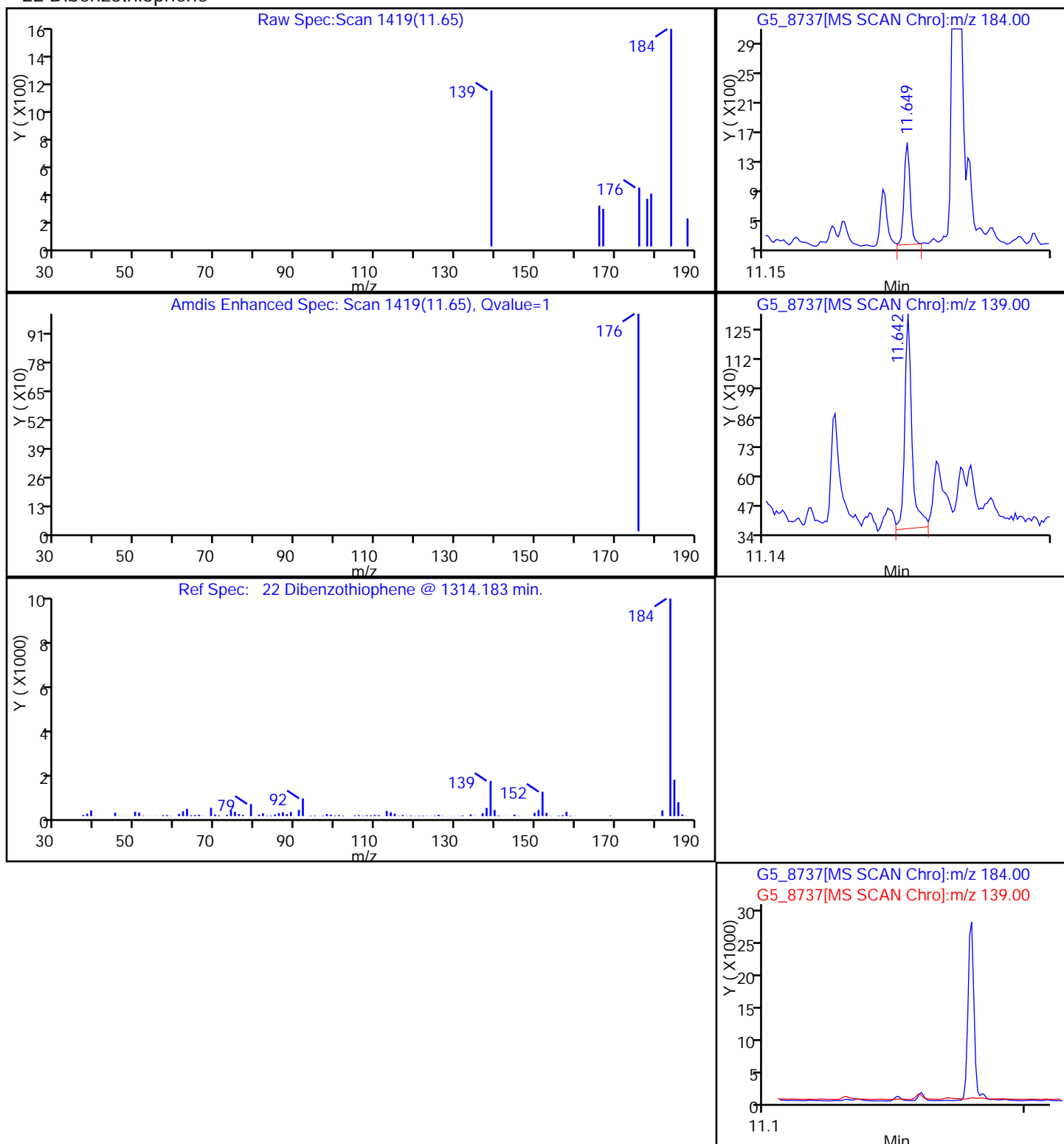
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

22 Dibenzothiophene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

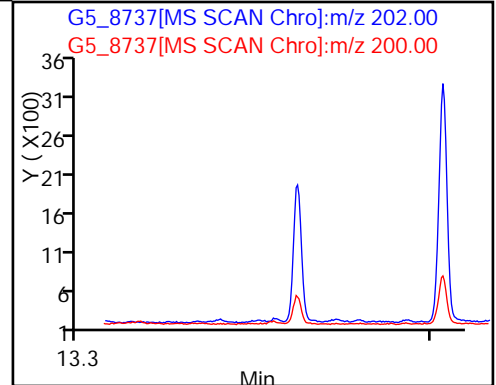
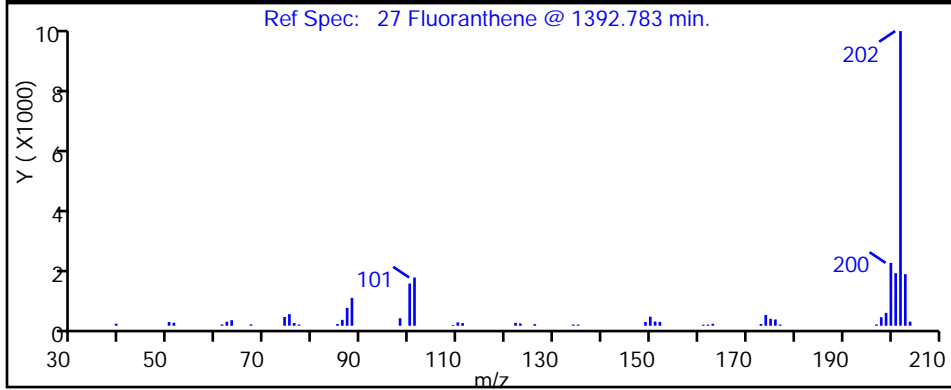
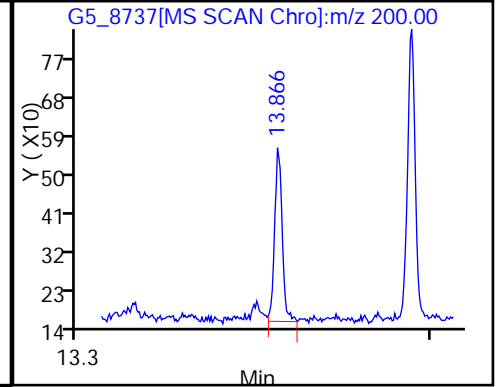
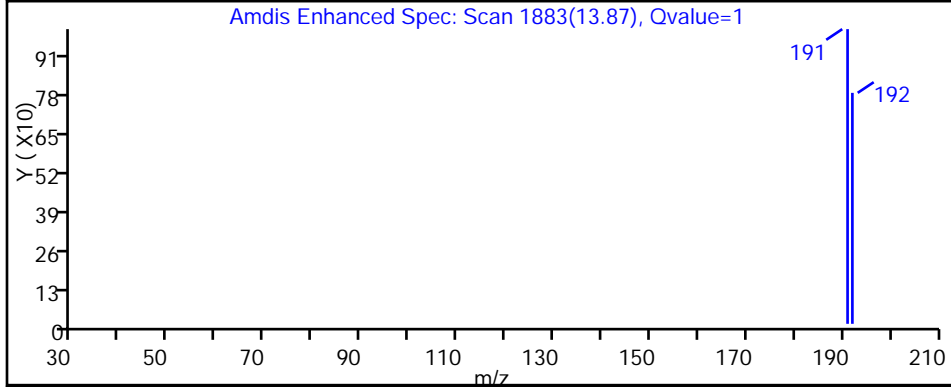
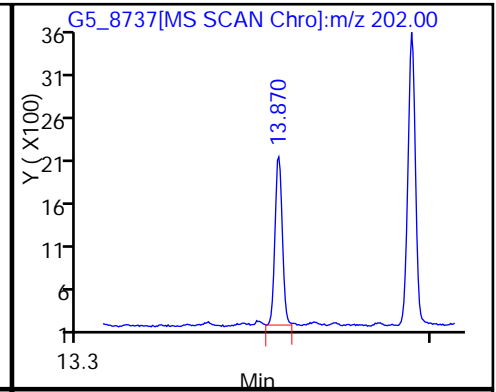
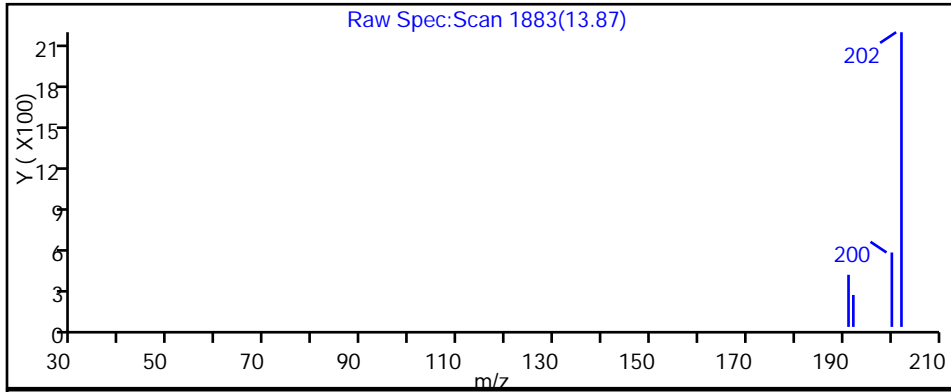
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

27 Fluoranthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

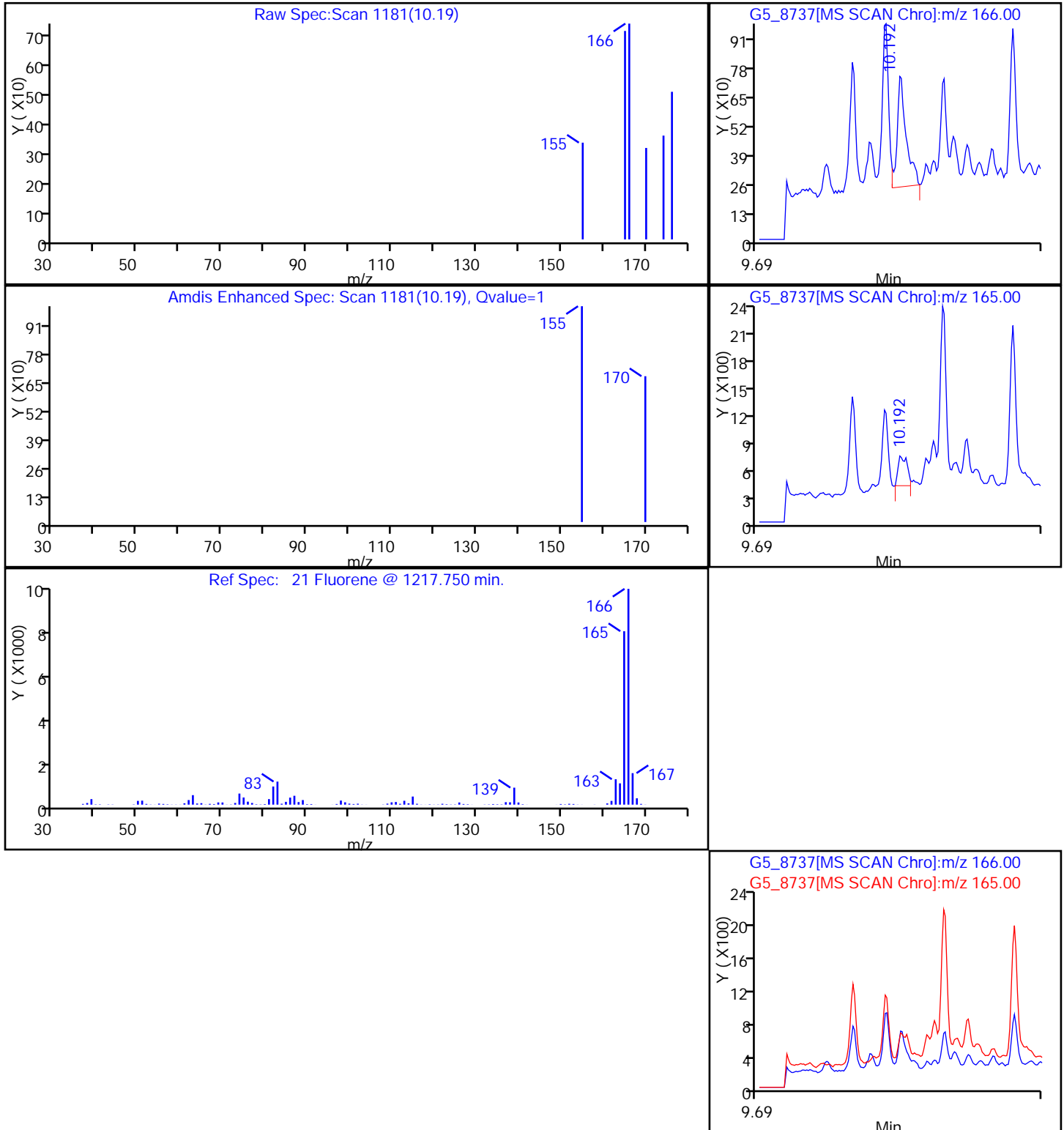
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

21 Fluorene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

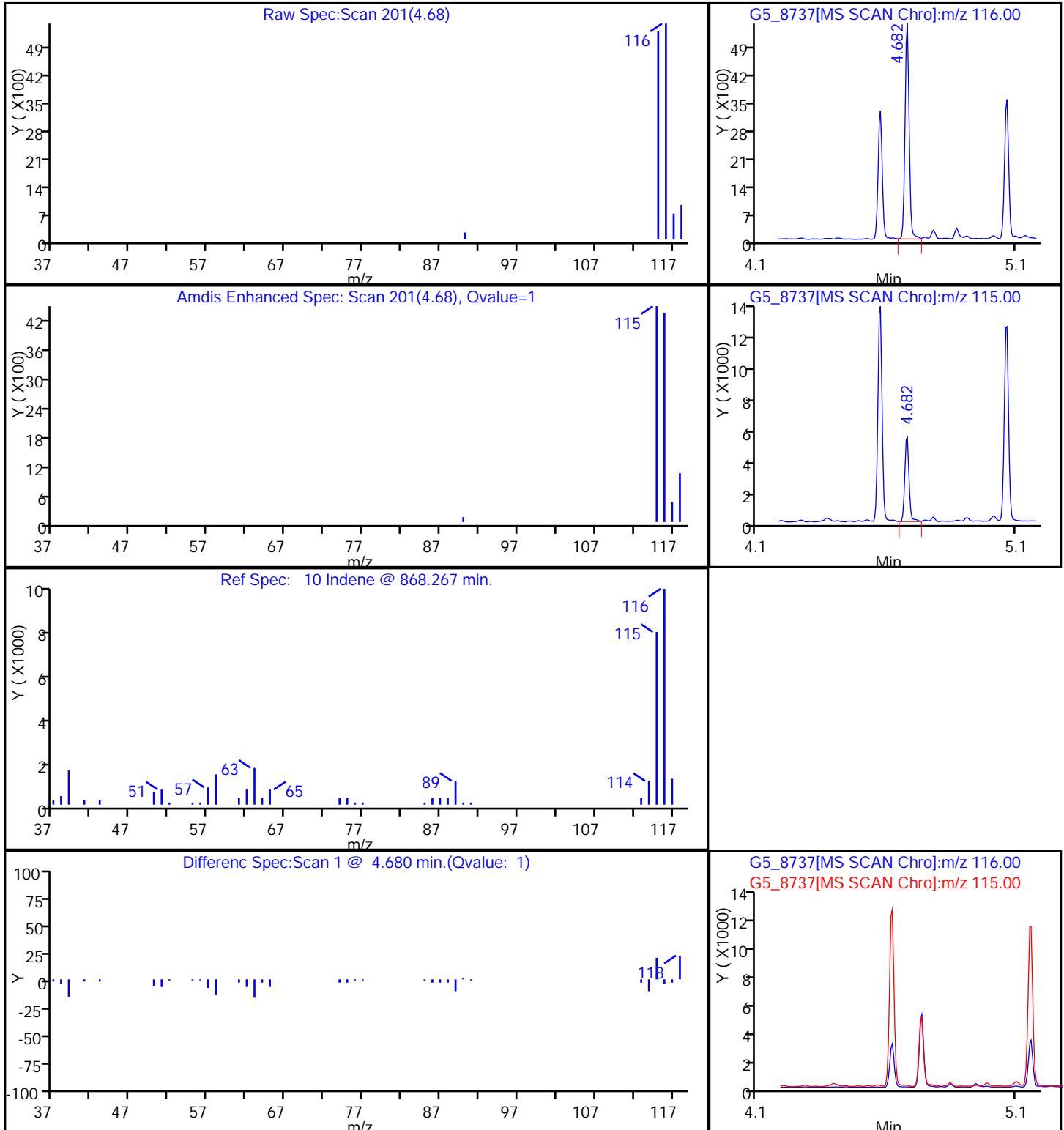
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

10 Indene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

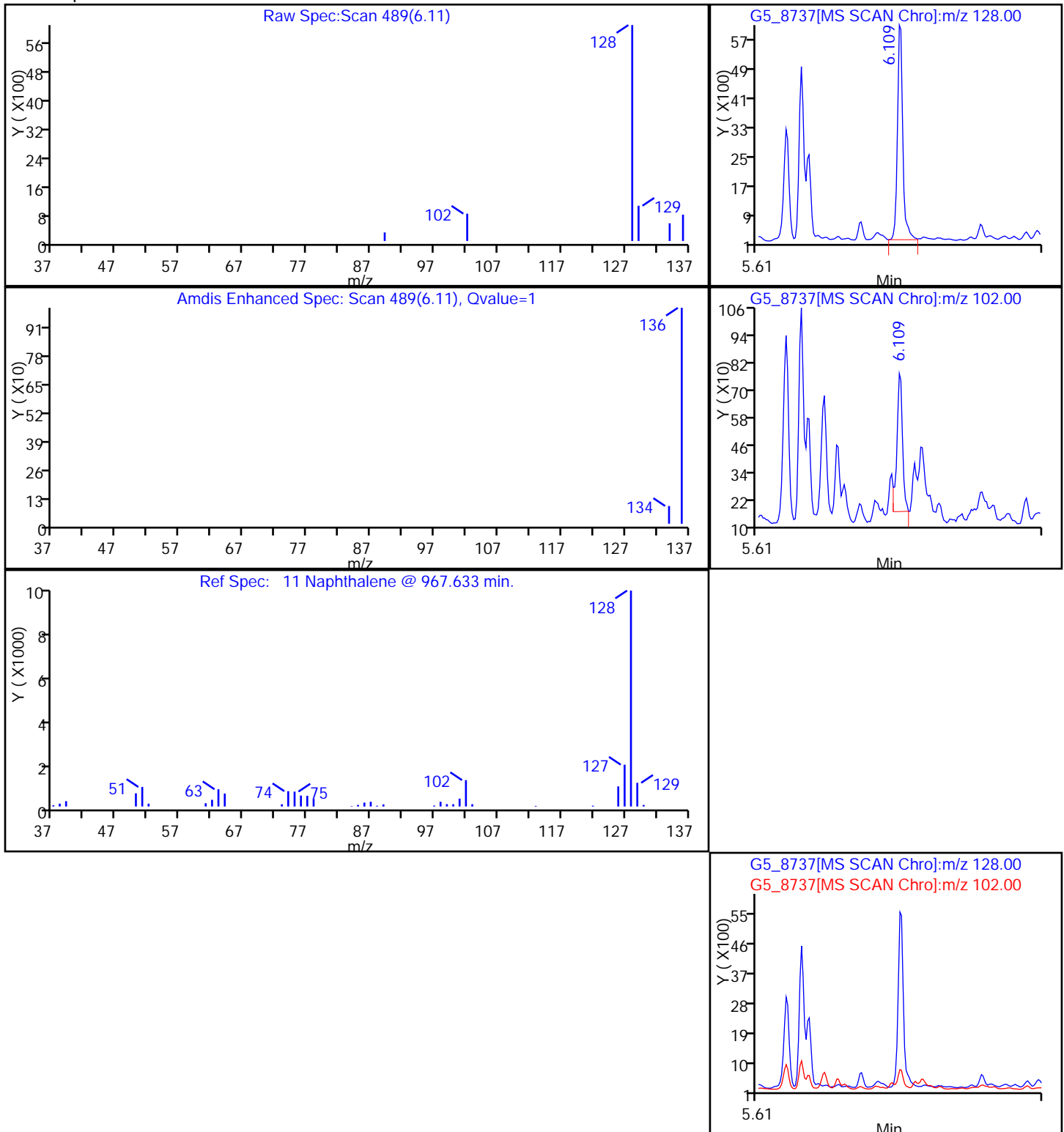
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

11 Naphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D

Injection Date: 21-Dec-2012 01:59:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP6-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 19

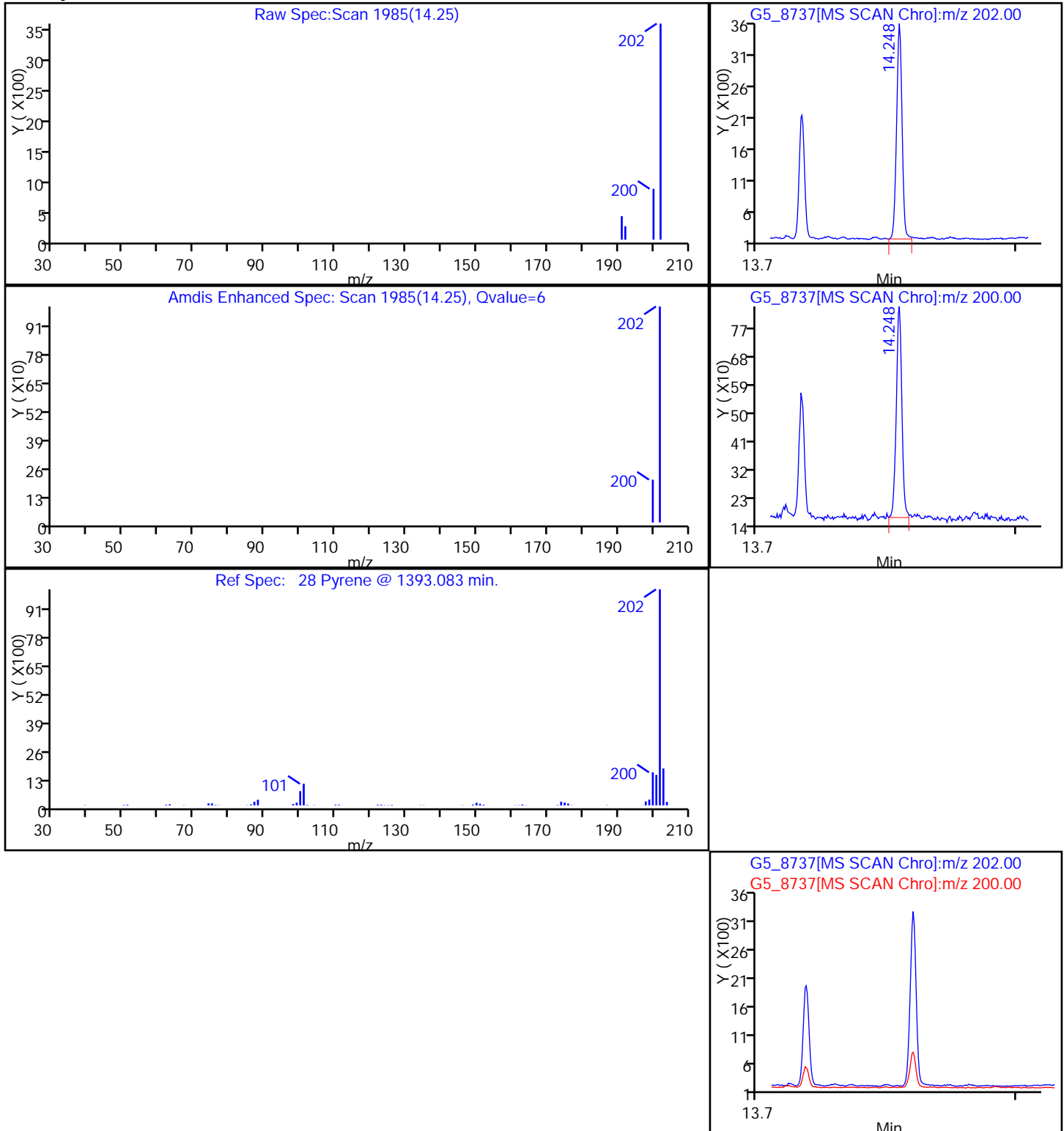
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

28 Pyrene



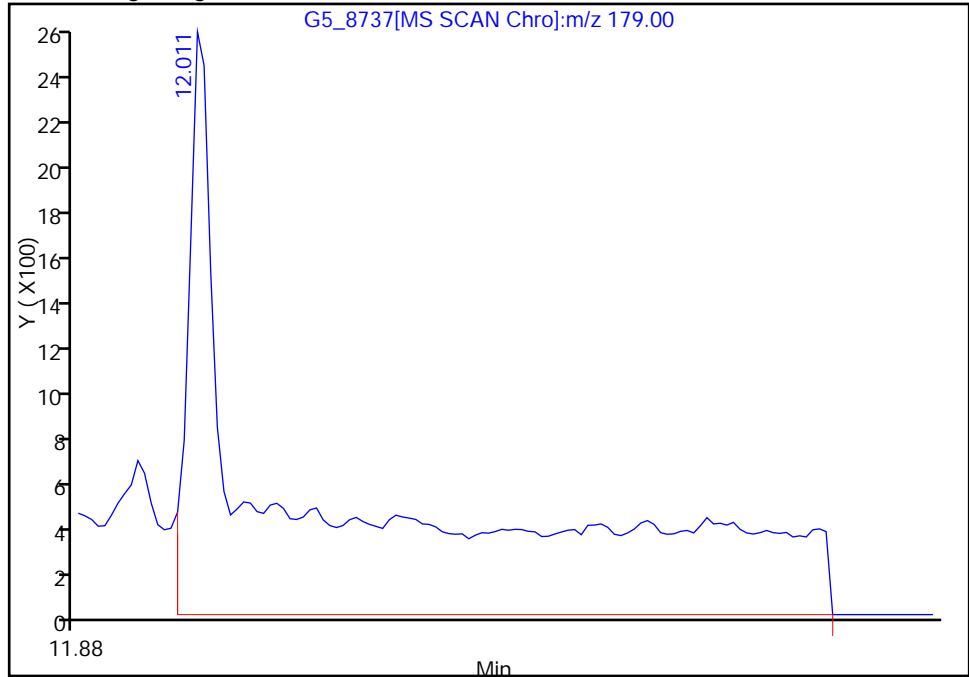
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8737.D		
Injection Date:	21-Dec-2012 01:59:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:	SLP6-120612	Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	19
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

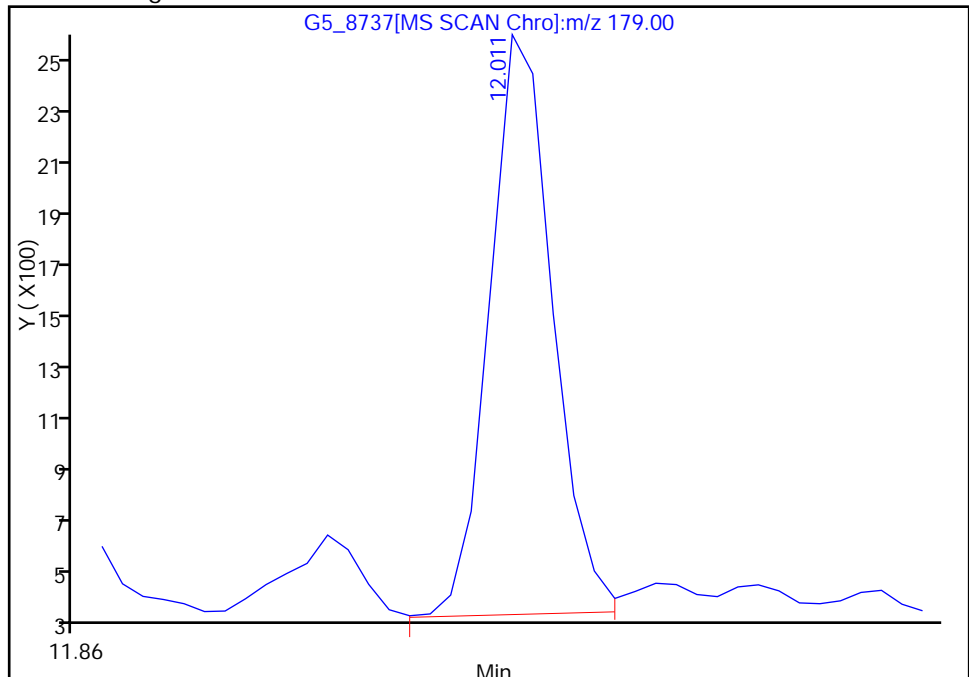
RT: 12.01
Response: 19968
Amount: 80.332303

Processing Integration Results



RT: 12.01
Response: 3355
Amount: 13.497340

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 07:12:44
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: W119-120612 Lab Sample ID: 280-36732-5

Matrix: Water Lab File ID: G5_8738.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:10

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3920.3(mL) Date Analyzed: 12/21/2012 02:35

Con. Extract Vol.: 1000(uL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.5	0.69
496-11-7	2,3-Dihydroindene	5.0	J	5.1	0.71
90-12-0	1-Methylnaphthalene	1.7	J	5.7	0.91
91-57-6	2-Methylnaphthalene	1.4	J	6.0	1.0
83-32-9	Acenaphthene	39		5.8	0.51
208-96-8	Acenaphthylene	2.2	J	4.9	0.79
260-94-6	Acridine	7.6		6.6	6.6
120-12-7	Anthracene	3.4	J	4.3	0.82
56-55-3	Benzo[a]anthracene	ND		4.4	0.94
50-32-8	Benzo[a]pyrene	ND		2.6	1.3
192-97-2	Benzo[e]pyrene	ND		4.4	1.2
205-99-2	Benzo[b]fluoranthene	ND		4.8	1.4
95-15-8	Benzo(b) thiophene	7.2		5.3	0.77
207-08-9	Benzo[k]fluoranthene	ND		4.2	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.3	1.2
86-74-8	Carbazole	1.3	J	3.9	0.73
218-01-9	Chrysene	ND		5.7	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.0	1.1
132-64-9	Dibenzofuran	ND		5.8	1.0
132-65-0	Dibenzothiophene	ND		4.2	1.0
206-44-0	Fluoranthene	ND		4.7	1.7
86-73-7	Fluorene	ND		4.2	0.87
95-13-6	Indene	18		4.8	3.3
120-72-9	Indole	ND		4.8	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.5	1.3
91-20-3	Naphthalene	4.4	J	8.8	1.2
198-55-0	Perylene	ND		3.9	3.9
85-01-8	Phenanthrene	ND		6.4	3.3
129-00-0	Pyrene	12	B	4.3	1.0
91-22-5	Quinoline	ND		9.2	5.8
92-52-4	Biphenyl	ND		5.7	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: W119-120612 Lab Sample ID: 280-36732-5
Matrix: Water Lab File ID: G5_8738.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:10
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3920.3(mL) Date Analyzed: 12/21/2012 02:35
Con. Extract Vol.: 1000(uL) Dilution Factor: 1
Injection Volume: 1(uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	80		23-84
1719-03-5	Chrysene-d12 (Surr)	25	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	78		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D
 Lims ID: 280-36732-B-5-A Client ID: W119-120612
 Inject. Date: 21-Dec-2012 02:35:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-020
 Misc. Info.: 280-36732-b-5-a =280-36732-B-5-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 19
 Lims Batch ID: 153241 Lims Sample ID: 20
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: RT Order ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:41:55

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	172868	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	281697	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	347352	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	116562	232.9	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	61914	238.9	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	34696	75.1	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	643	2.64	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	6158	19.5	
10 Indene	116	4.682	4.682	0.0	1	22165	71.2	
11 Naphthalene	128	6.109	6.114	-0.005	1	8912	17.3	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	13051	28.1	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	1879	5.58	
16 1-Methylnaphthalene	142	7.454	7.458	-0.004	1	2014	6.54	
18 Acenaphthylene	152	8.948	8.948	0.0	1	3495	8.73	
19 Acenaphthene	154	9.265	9.273	-0.008	4	42233	151.4	
23 Phenanthrene	178	11.862	11.862	0.0	1	3083	6.60	
24 Anthracene	178	11.948	11.947	0.001	1	5204	13.5	
25 Acridine	179	12.012	12.019	-0.006	1	7594	29.8	M
26 Carbazole	167	12.246	12.246	0.0	1	1832	4.97	
27 Fluoranthene	202	13.870	13.870	0.0	1	1607	3.89	
28 Pyrene	202	14.248	14.248	0.0	6	20802	45.3	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	929	2.54	
30 Chrysene	228	16.282	16.282	0.0	1	1092	2.06	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	1959	4.08	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	2140	3.71	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	754	1.58	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	1818	4.17	
37 Perylene	252	18.465	18.465	0.0	1	520	0.9685	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	998	2.39	
44 Benzo[g,h,i]perylene	276	20.441	20.436	0.005	1	1250	2.83	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

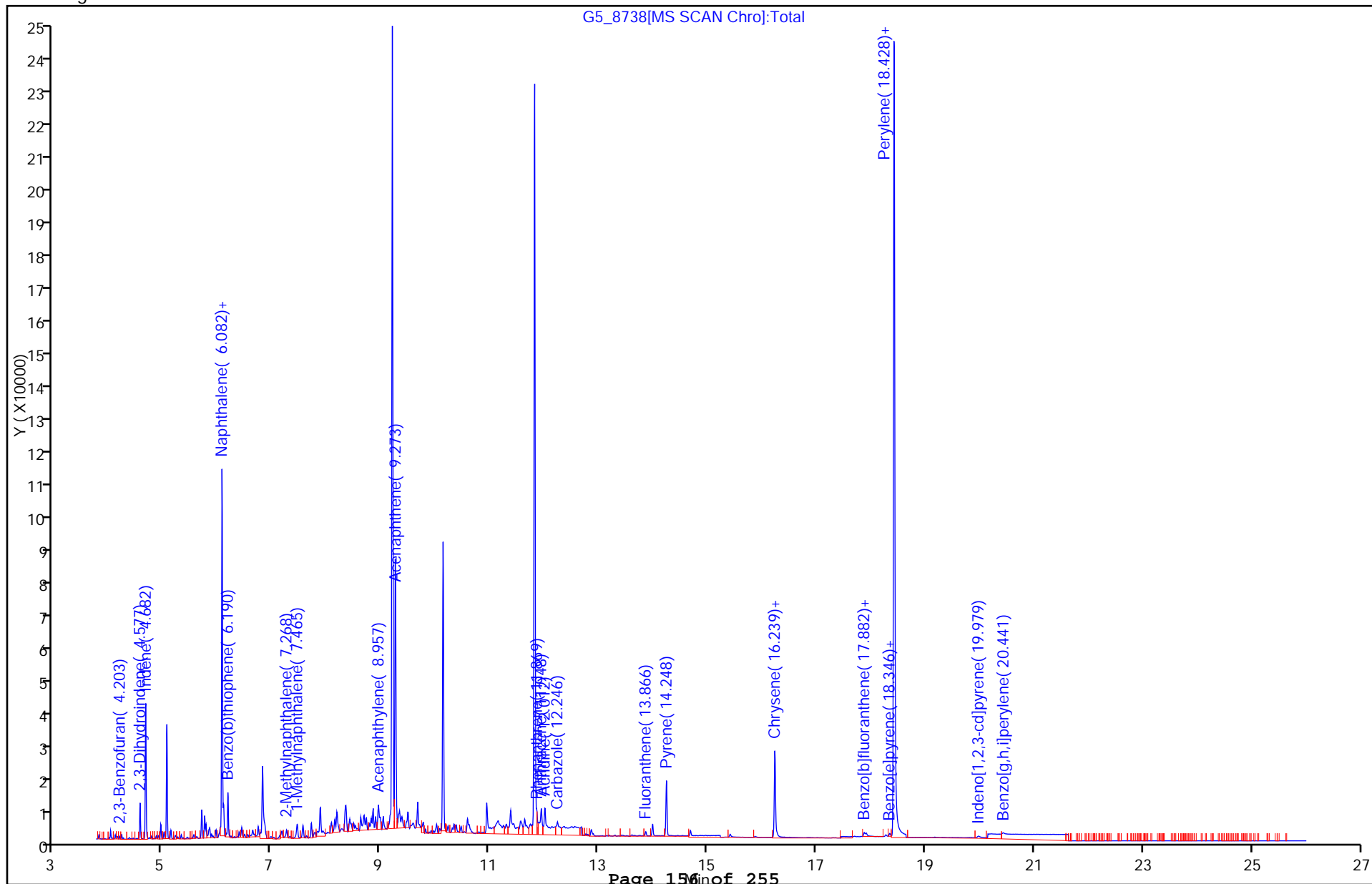
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

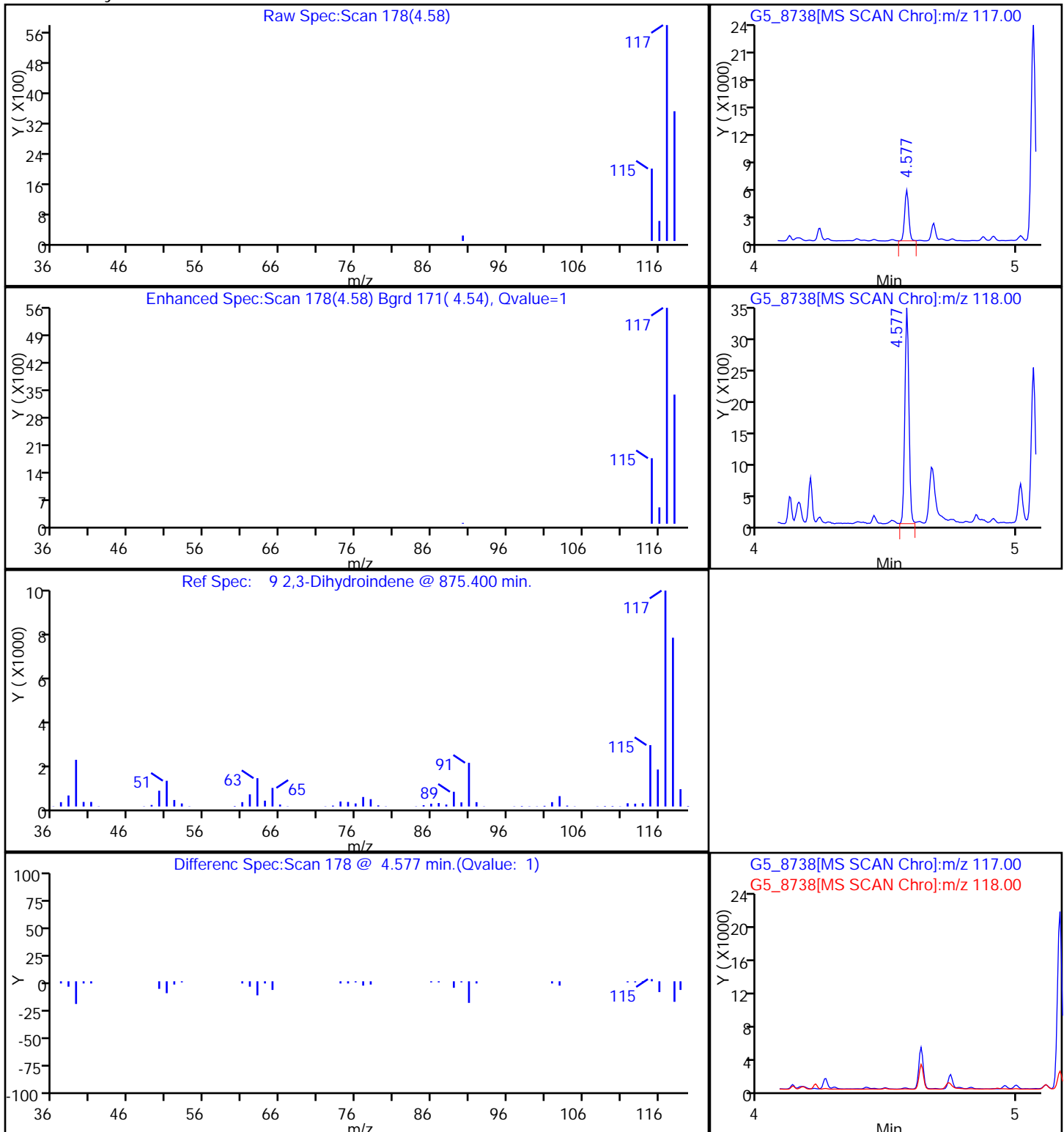
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

9,2,3-Dihydroindene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

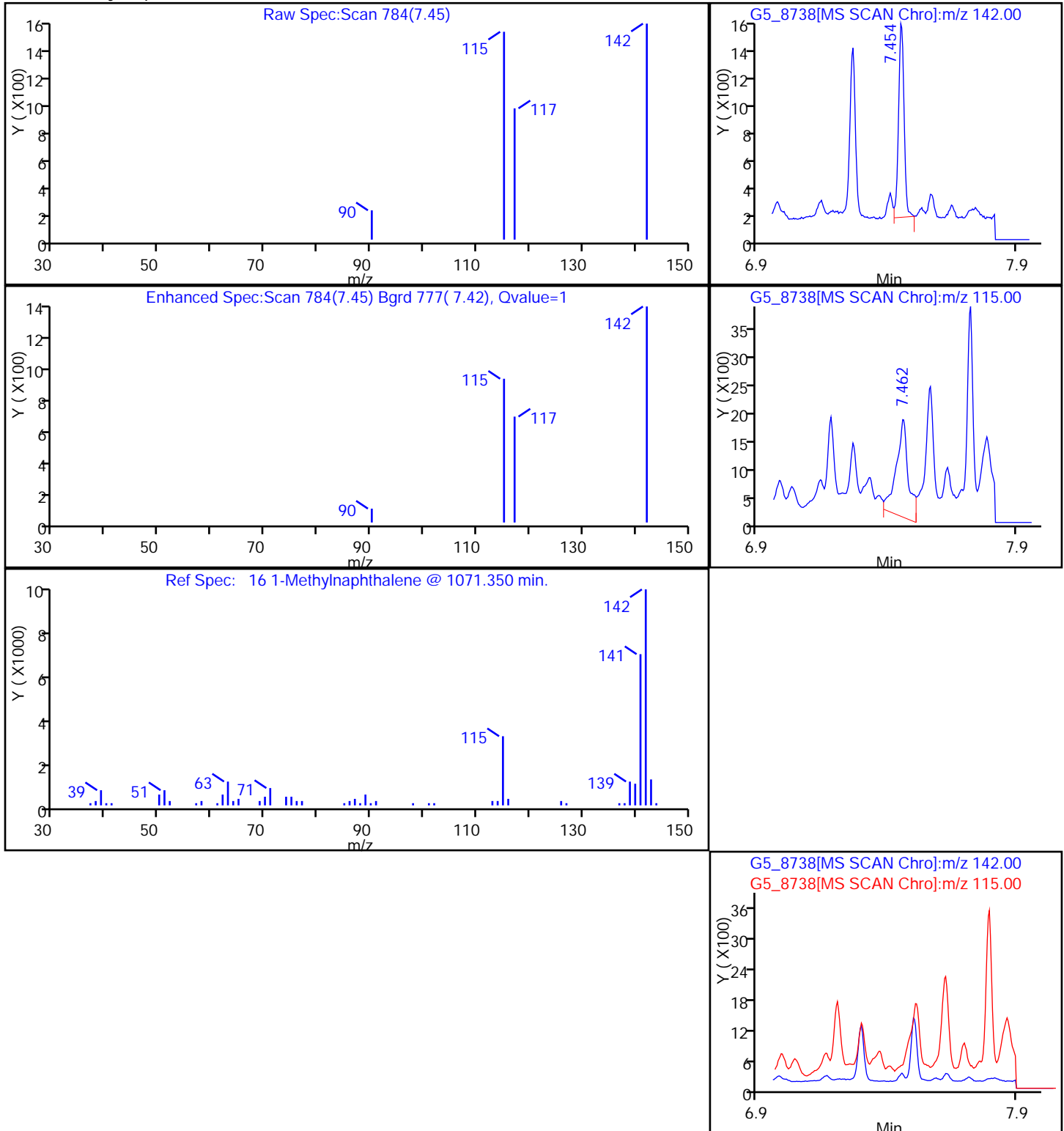
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

16 1-Methylnaphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

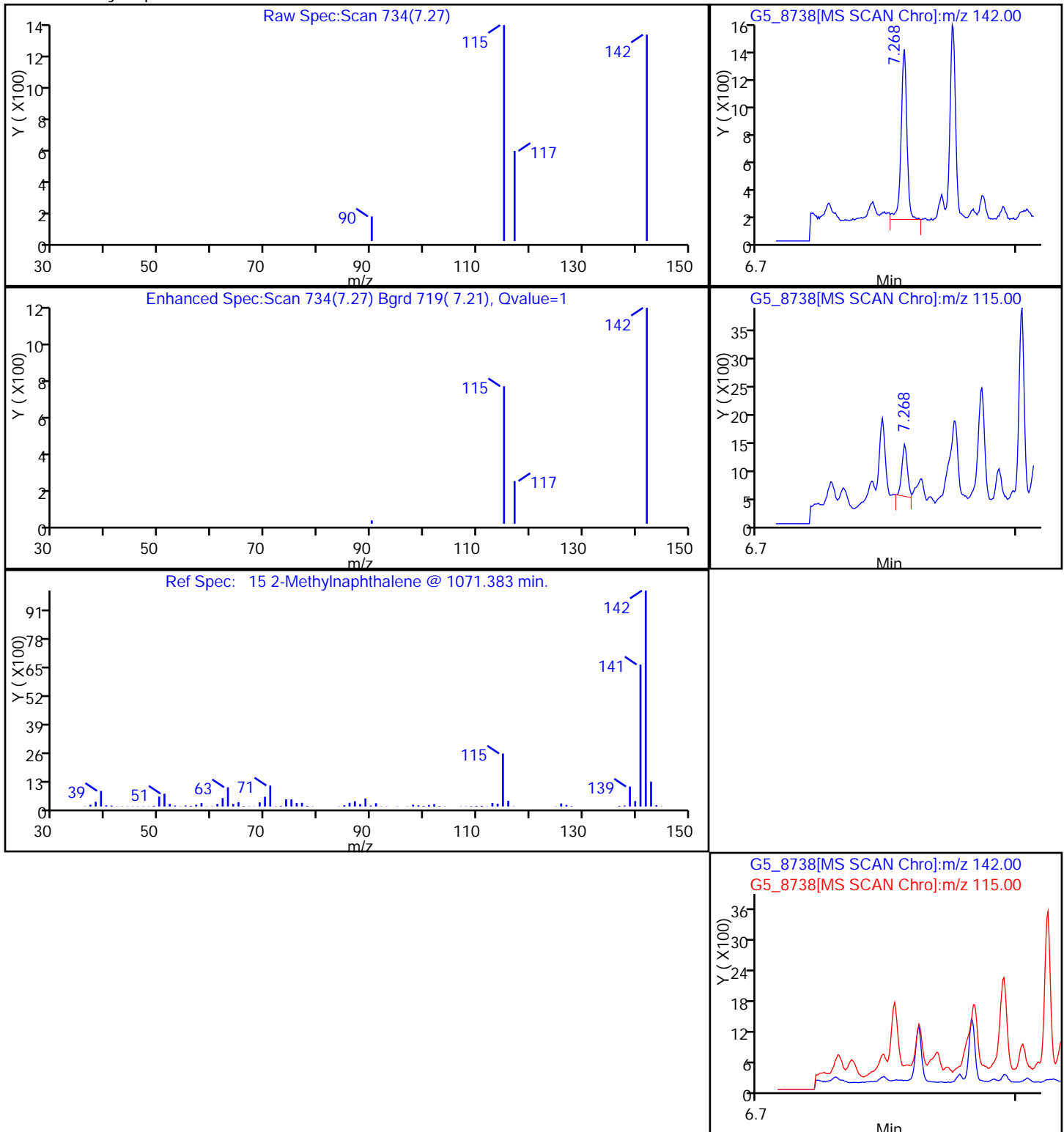
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

15 2-Methylnaphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

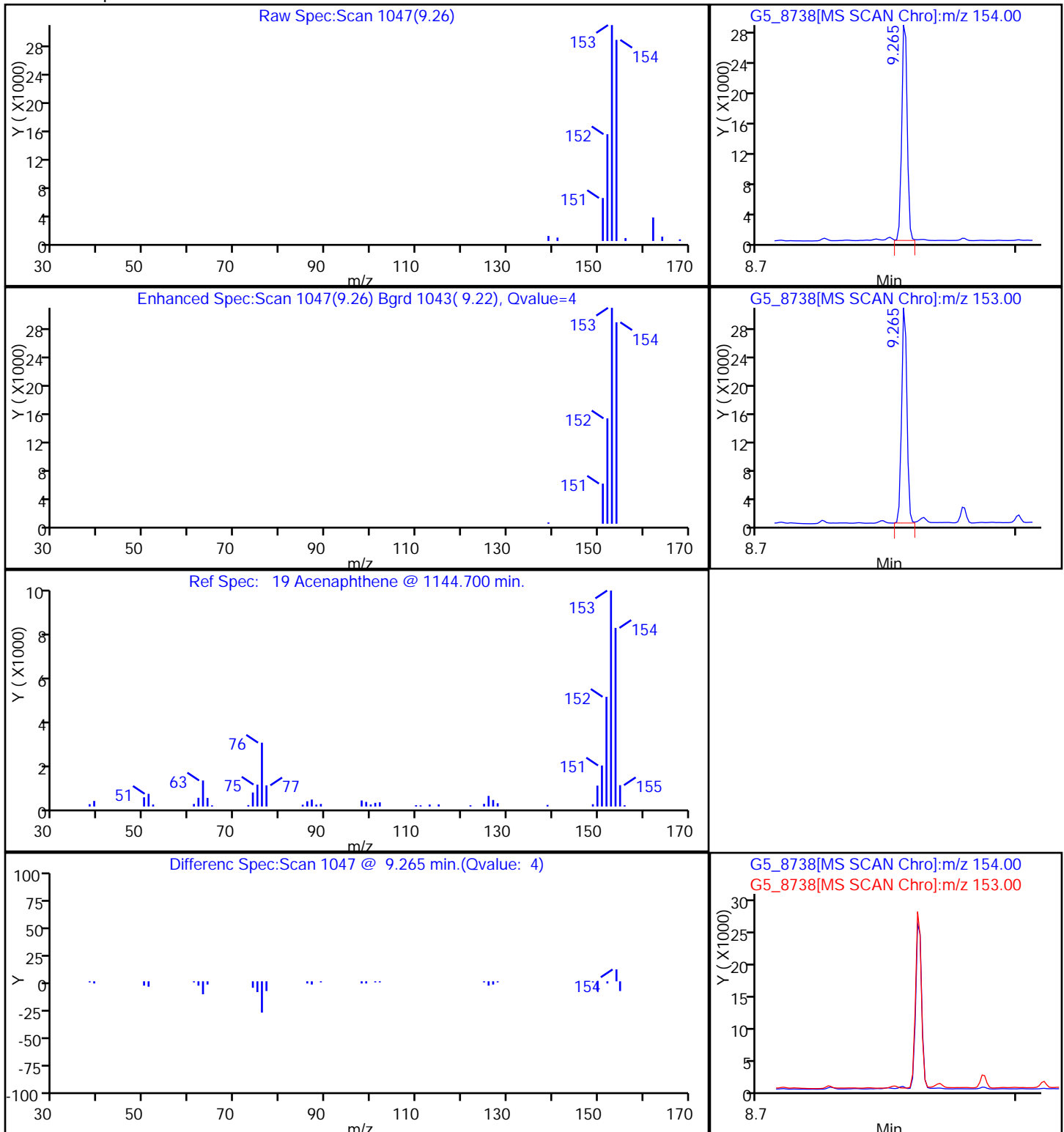
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

19 Acenaphthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

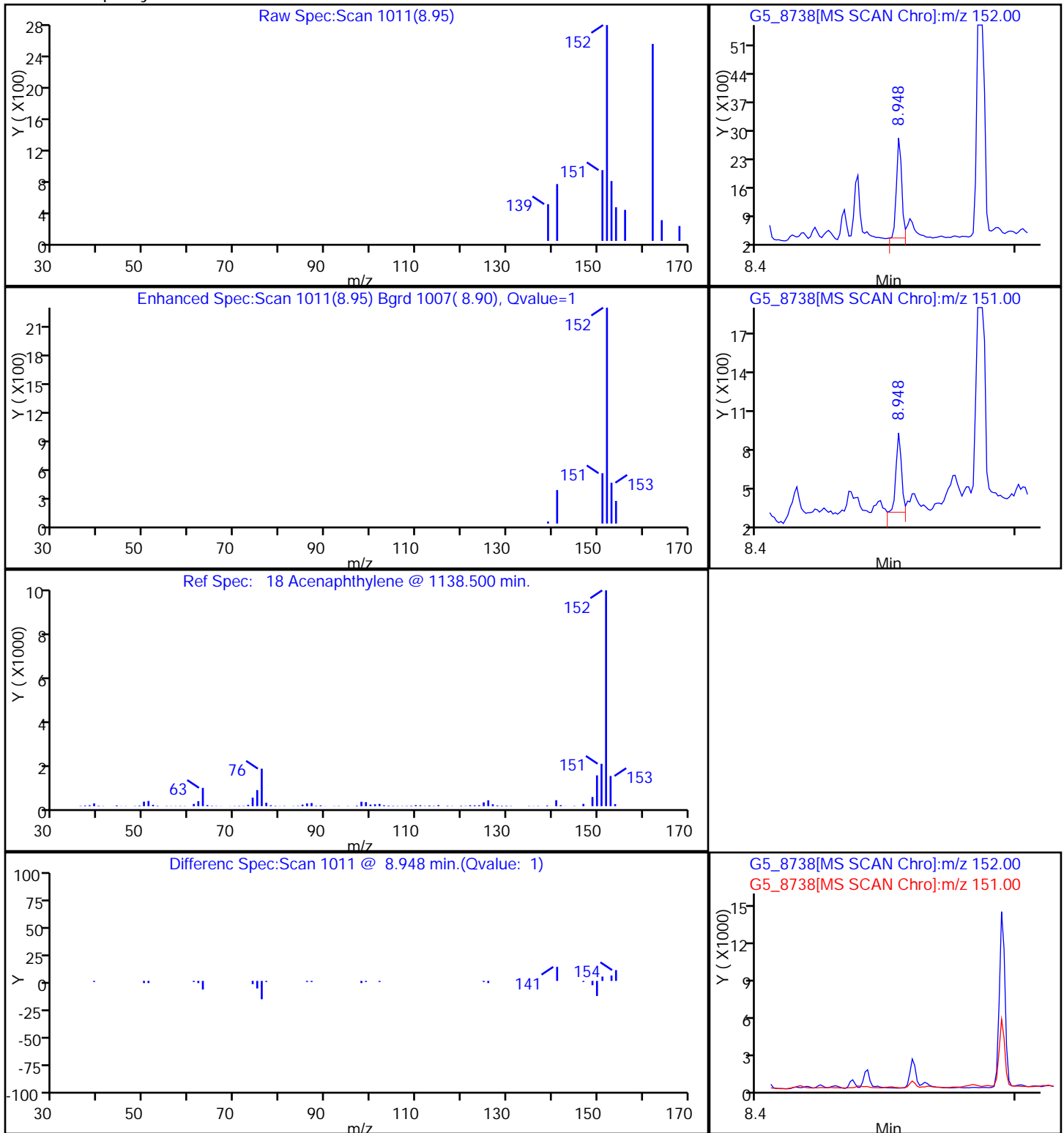
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

18 Acenaphthylene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

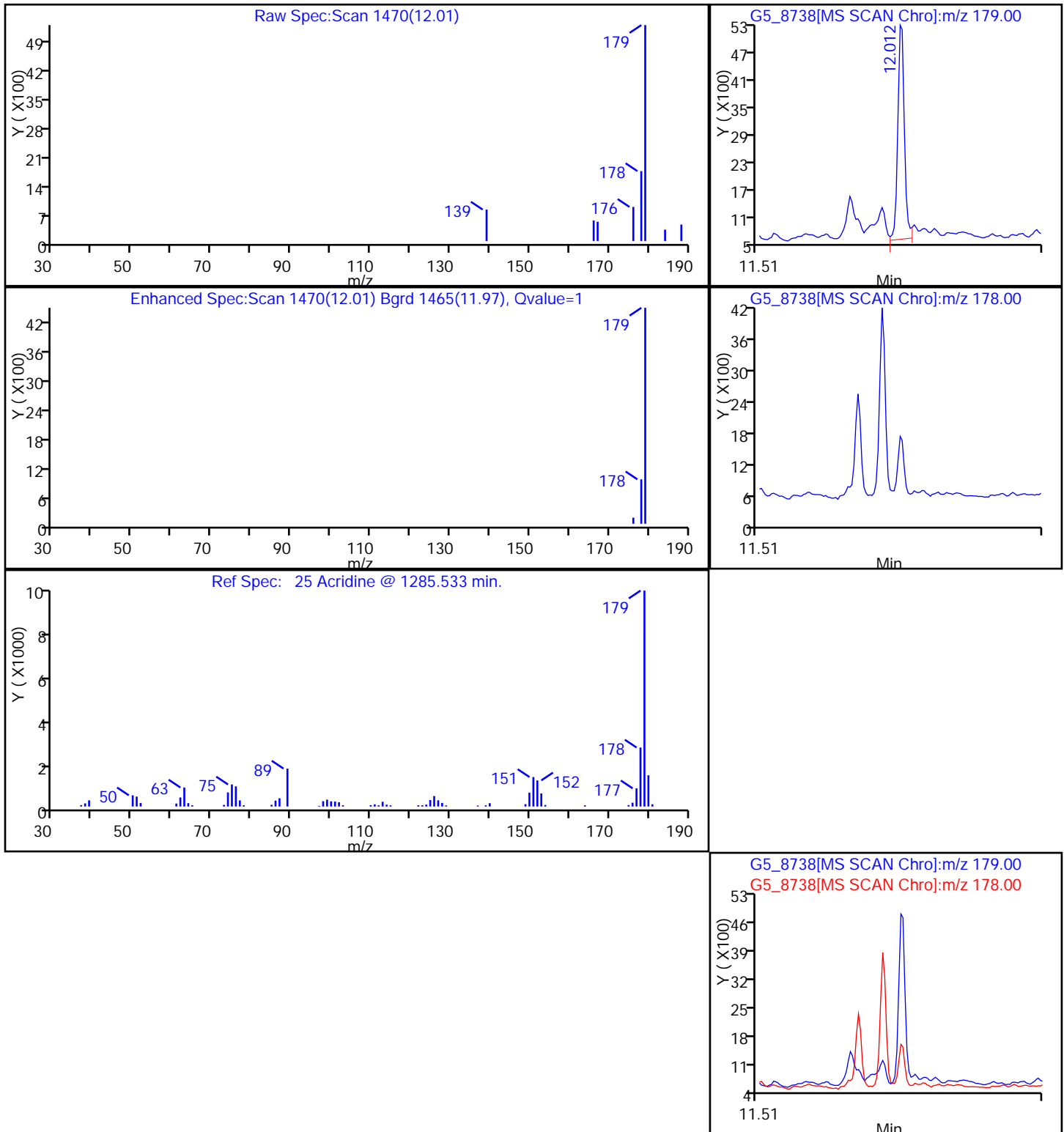
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

25 Acridine



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

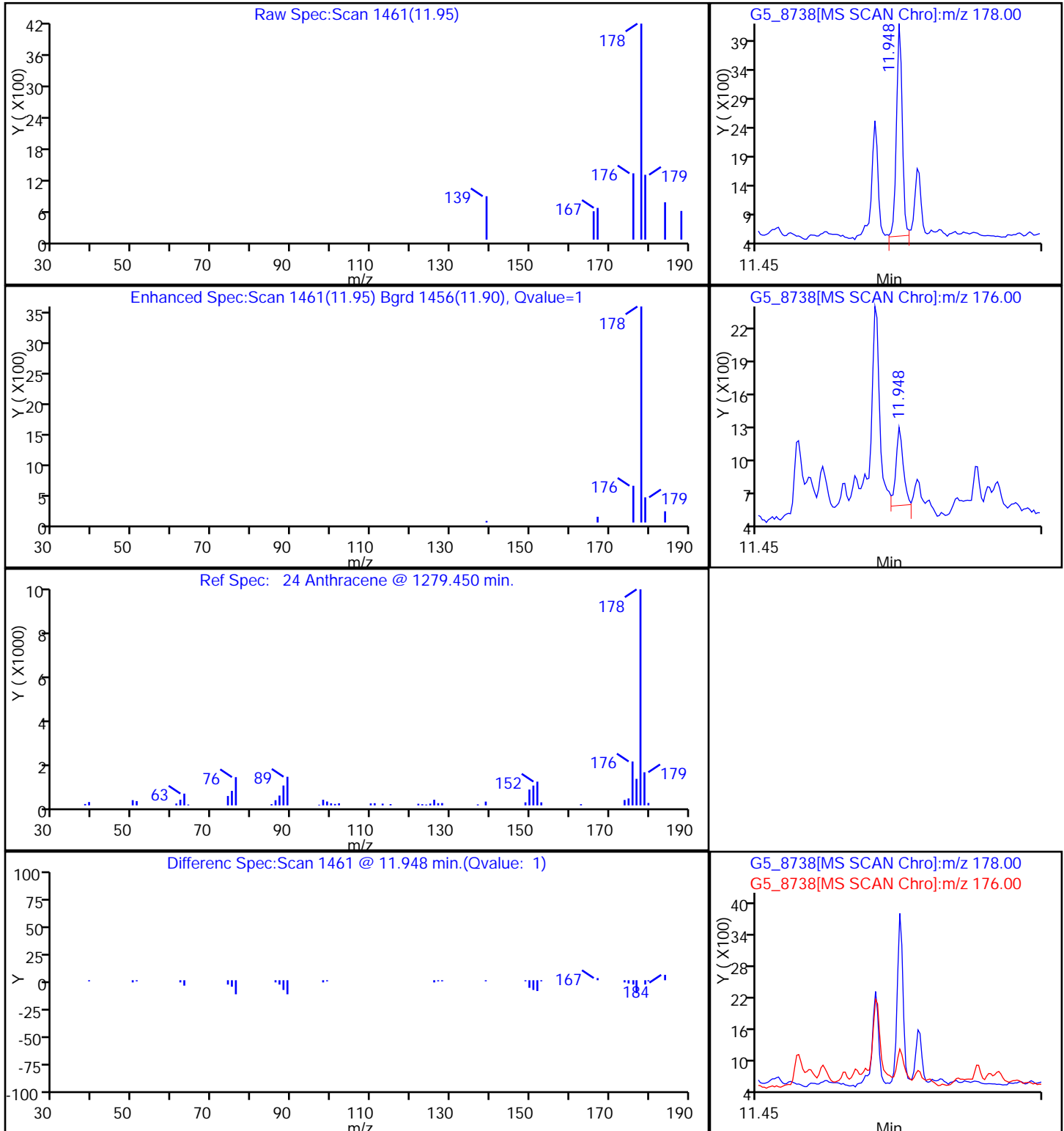
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

24 Anthracene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

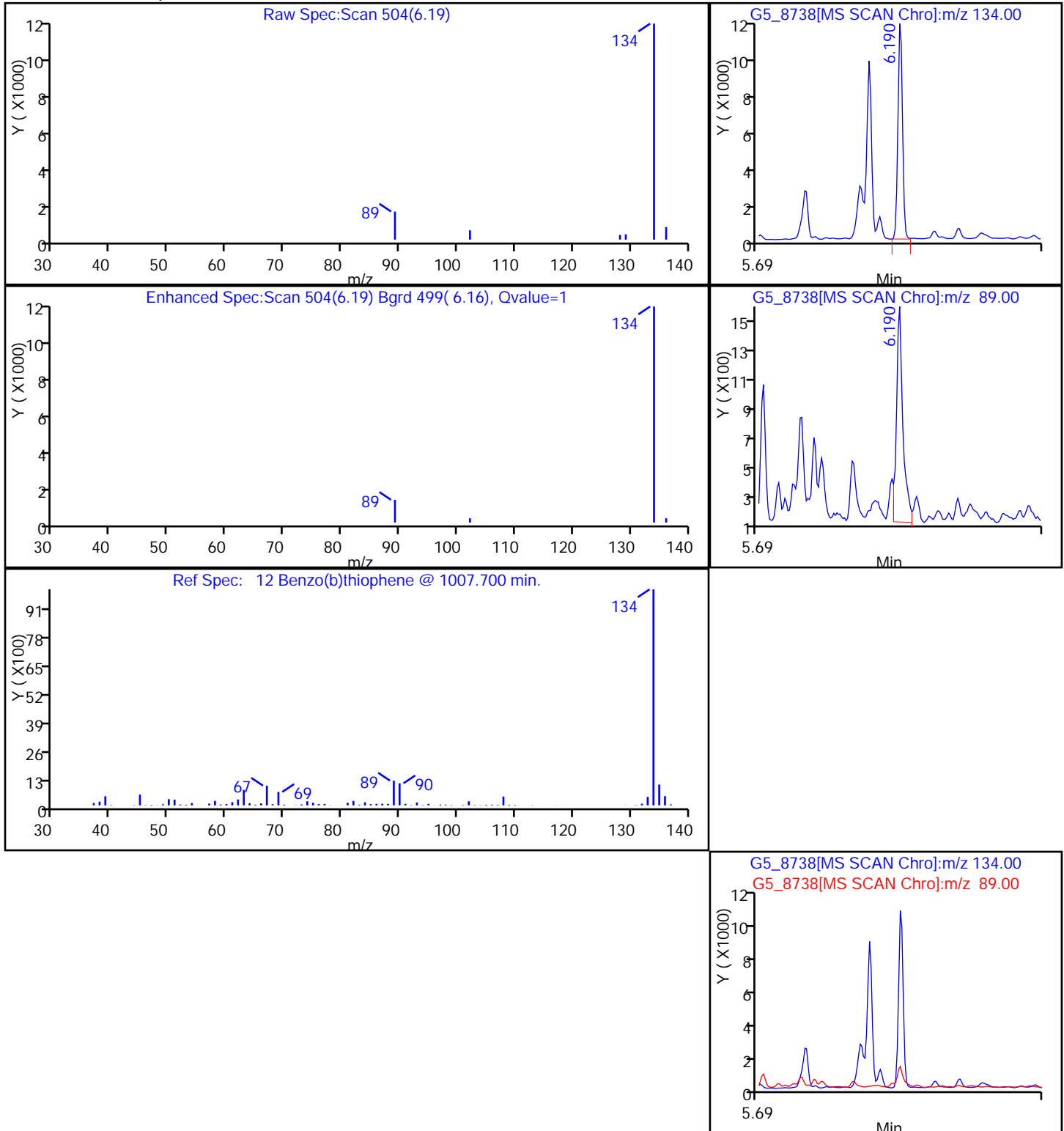
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

12 Benzo(b)thiophene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

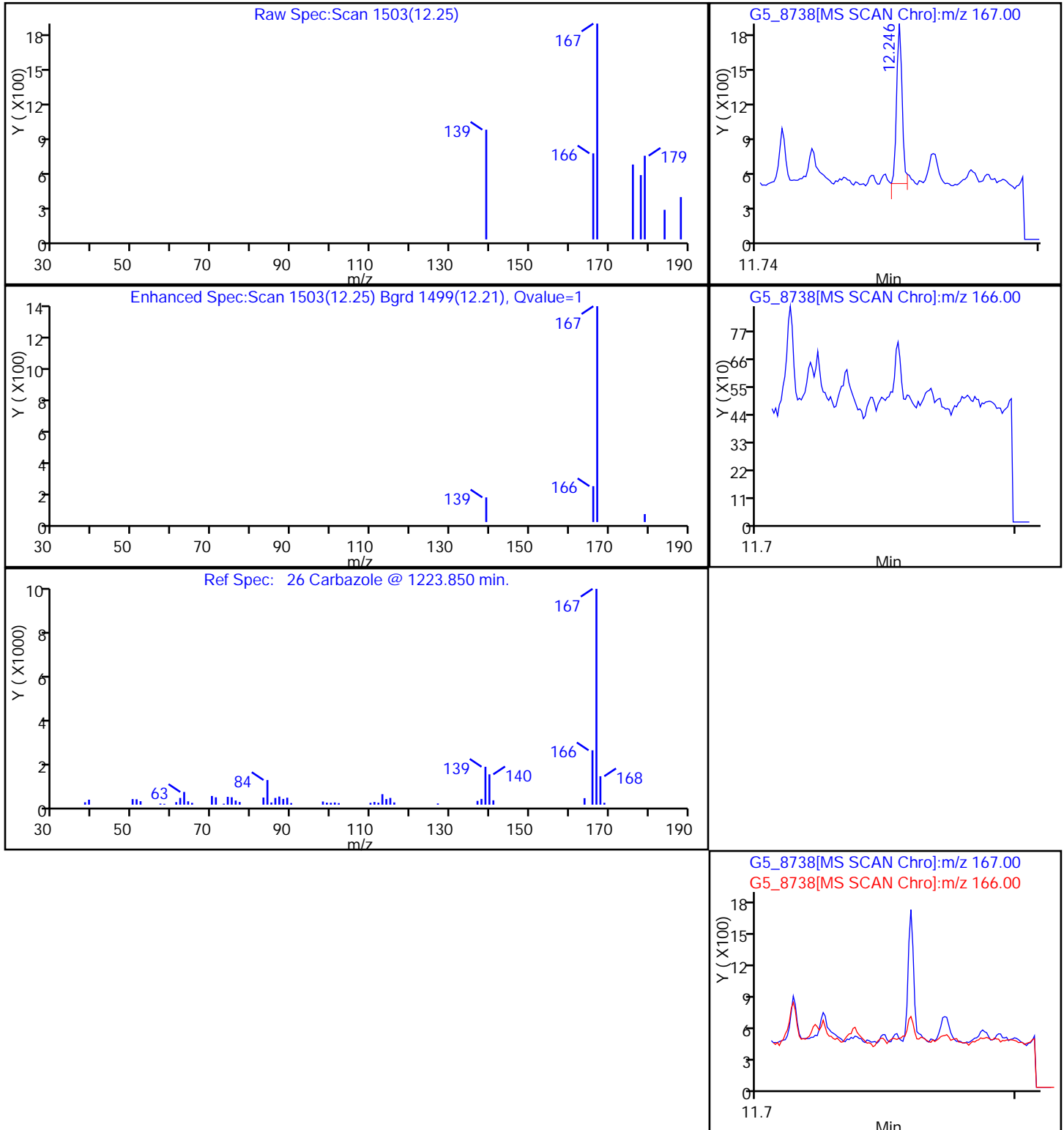
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

26 Carbazole



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

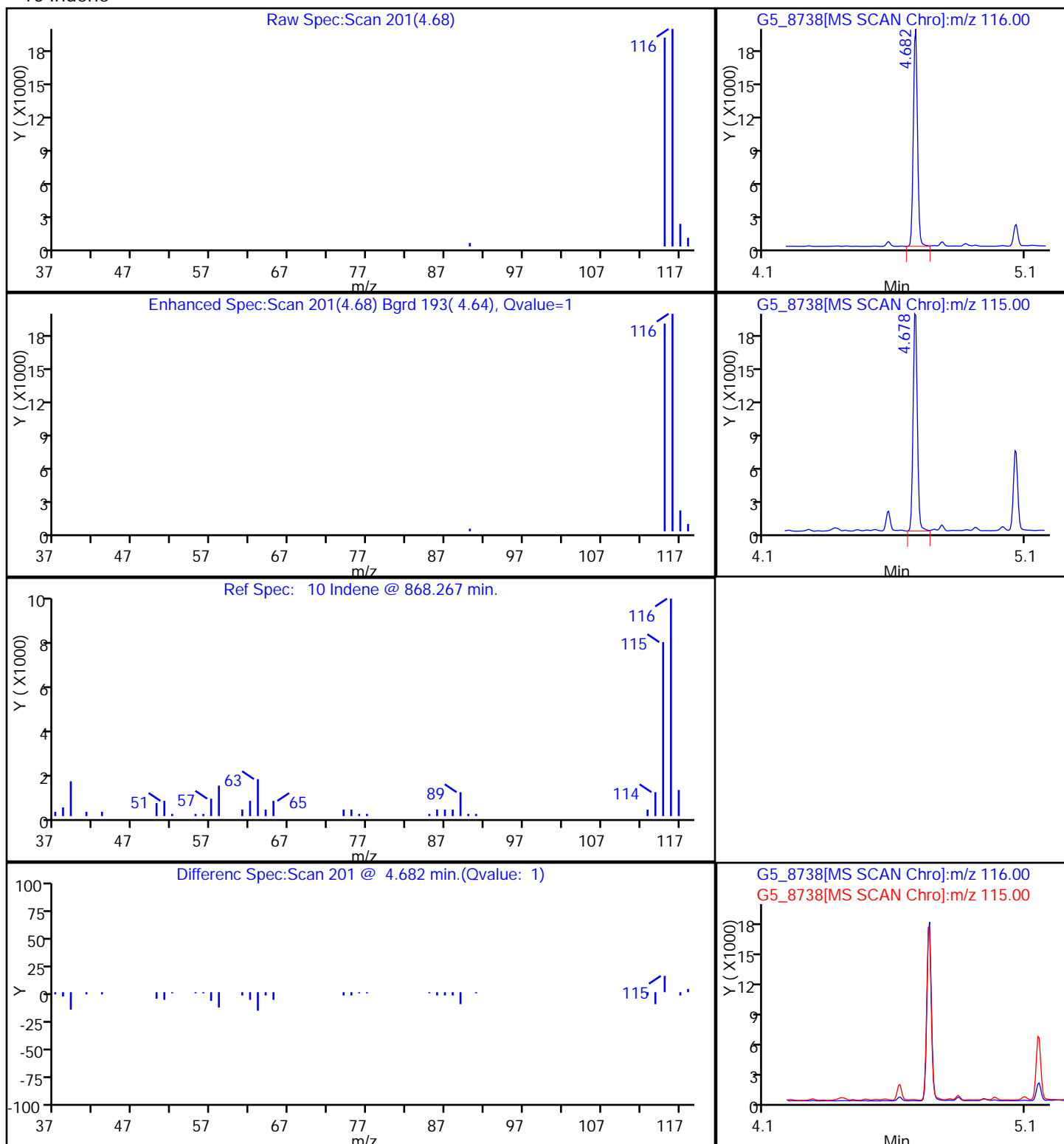
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

10 Indene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

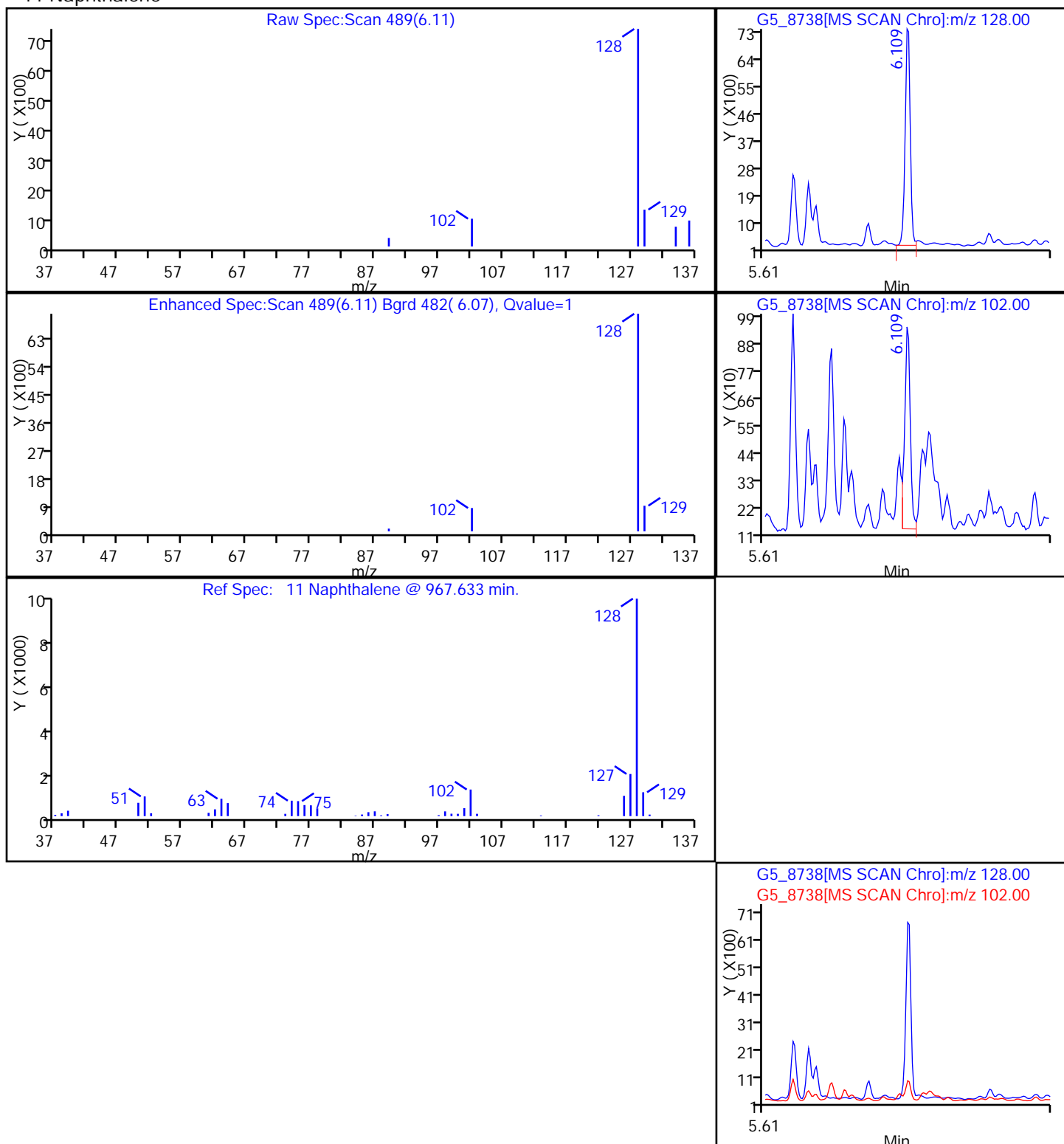
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

11 Naphthalene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D

Injection Date: 21-Dec-2012 02:35:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W119-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 20

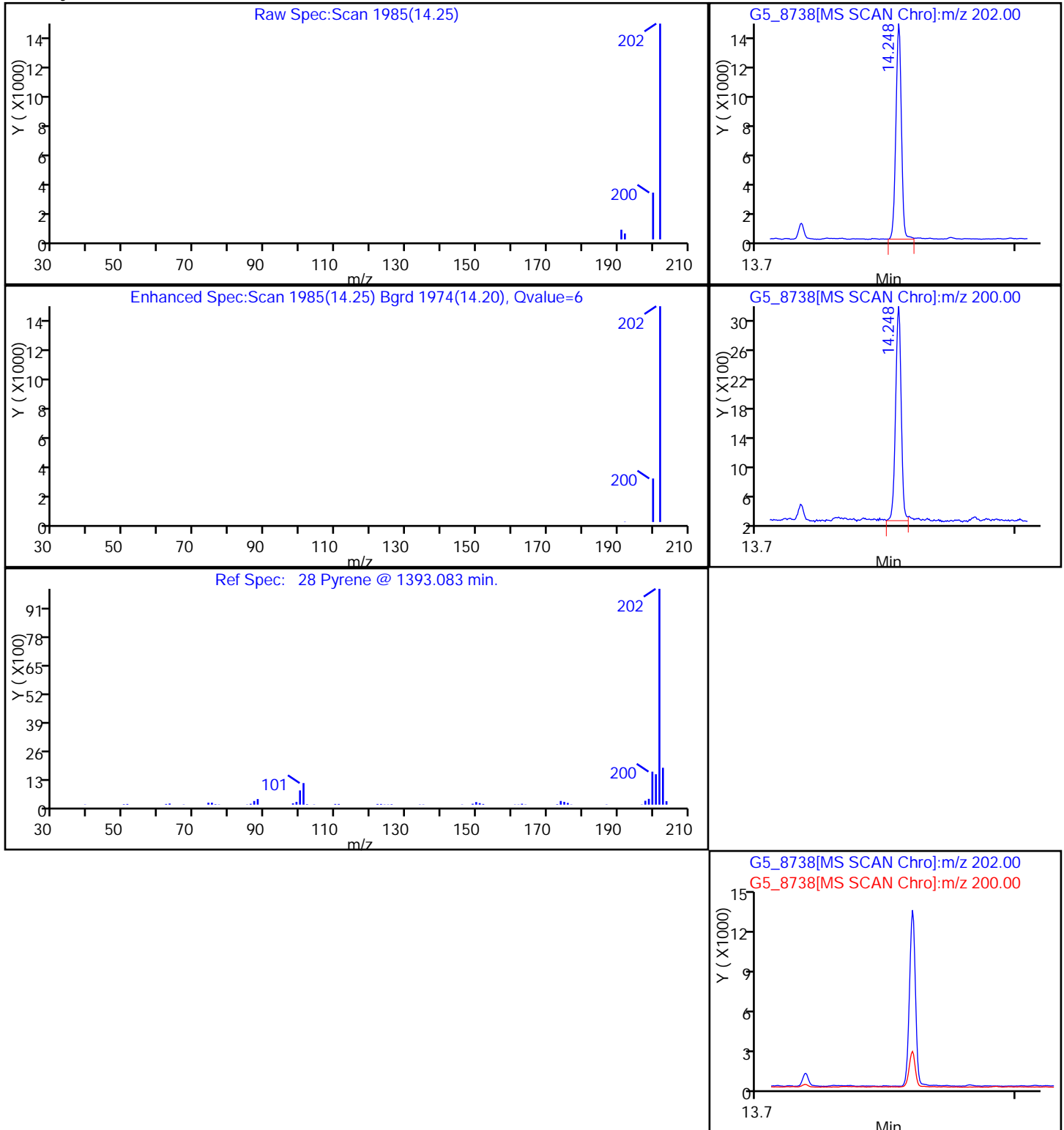
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

28 Pyrene



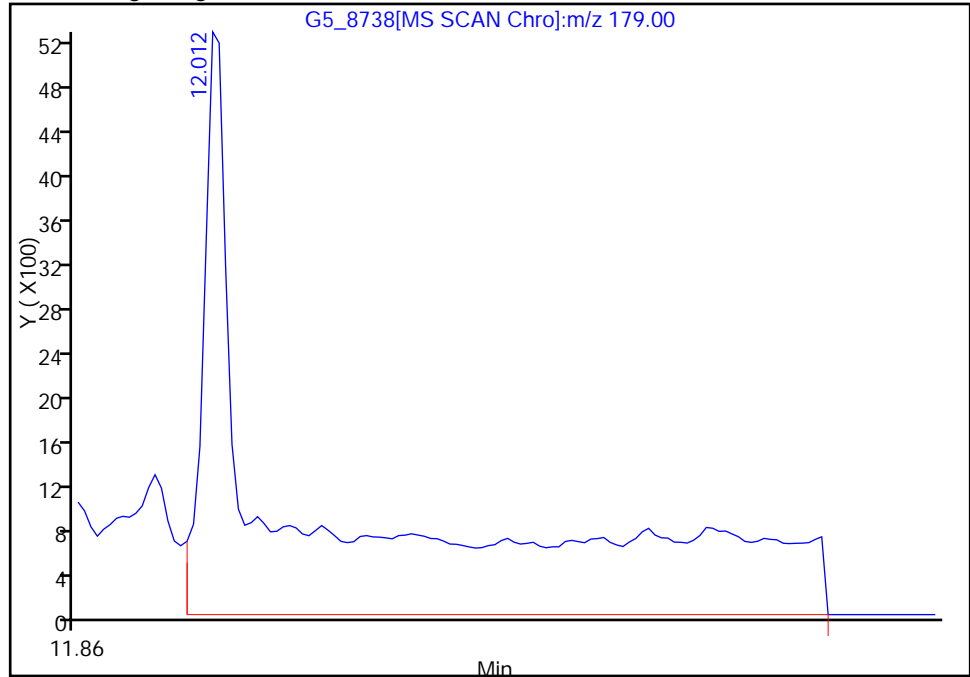
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8738.D		
Injection Date:	21-Dec-2012 02:35:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:	W119-120612	Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	20
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

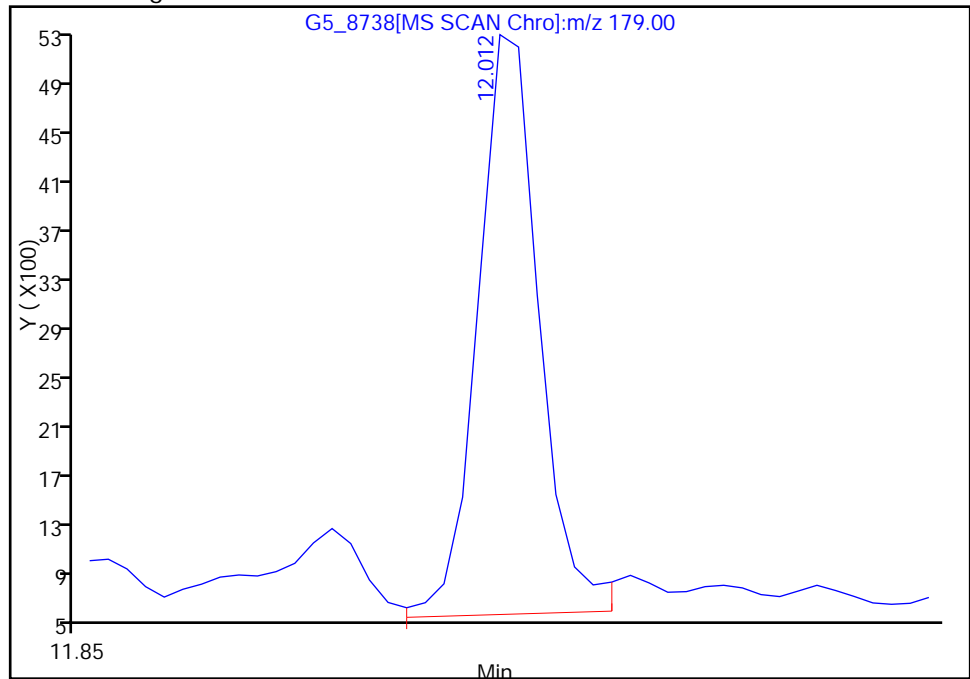
RT: 12.01
Response: 36215
Amount: 142.0610

Processing Integration Results



RT: 12.01
Response: 7594
Amount: 29.789062

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 07:41:55
Audit Action: Manually Integrated
Audit Reason: Baseline

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: W48-120612 Lab Sample ID: 280-36732-6

Matrix: Water Lab File ID: G5_8739.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 11:00

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3938.7 (mL) Date Analyzed: 12/21/2012 03:11

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	0.89	J	5.5	0.69
496-11-7	2,3-Dihydroindene	5.1		5.1	0.71
90-12-0	1-Methylnaphthalene	3.2	J	5.7	0.90
91-57-6	2-Methylnaphthalene	1.8	J	6.0	1.0
83-32-9	Acenaphthene	96		5.8	0.51
208-96-8	Acenaphthylene	4.1	J	4.9	0.78
260-94-6	Acridine	13		6.6	6.6
120-12-7	Anthracene	5.4		4.3	0.81
56-55-3	Benzo[a]anthracene	ND		4.4	0.93
50-32-8	Benzo[a]pyrene	ND		2.5	1.3
192-97-2	Benzo[e]pyrene	ND		4.4	1.2
205-99-2	Benzo[b]fluoranthene	ND		4.8	1.4
95-15-8	Benzo(b) thiophene	12		5.3	0.76
207-08-9	Benzo[k]fluoranthene	ND		4.2	1.3
191-24-2	Benzo[g,h,i]perylene	ND		6.3	1.2
86-74-8	Carbazole	1.7	J	3.9	0.73
218-01-9	Chrysene	ND		5.7	1.3
53-70-3	Dibenz(a,h)anthracene	ND		6.0	1.1
132-64-9	Dibenzofuran	ND		5.8	1.0
132-65-0	Dibenzothiophene	ND		4.2	1.0
206-44-0	Fluoranthene	ND		4.7	1.7
86-73-7	Fluorene	ND		4.2	0.86
95-13-6	Indene	47		4.8	3.3
120-72-9	Indole	2.1	J	4.8	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	ND		5.5	1.3
91-20-3	Naphthalene	5.2	J	8.7	1.2
198-55-0	Perylene	ND		3.9	3.9
85-01-8	Phenanthrene	ND		6.4	3.3
129-00-0	Pyrene	3.6	J B	4.3	1.0
91-22-5	Quinoline	ND		9.1	5.7
92-52-4	Biphenyl	ND		5.7	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: W48-120612 Lab Sample ID: 280-36732-6
Matrix: Water Lab File ID: G5_8739.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 11:00
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3938.7 (mL) Date Analyzed: 12/21/2012 03:11
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	83		23-84
1719-03-5	Chrysene-d12 (Surr)	43		28-101
1146-65-2	Naphthalene-d8 (Surr)	75		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8739.D
 Lims ID: 280-36732-D-6-A Client ID: W48-120612
 Inject. Date: 21-Dec-2012 03:11:30 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-0007476-021
 Misc. Info.: 280-36732-d-6-a =280-36732-D-6-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 20
 Lims Batch ID: 153241 Lims Sample ID: 21
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: RT Order ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:42:39

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	174582	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	277630	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	350690	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	112970	223.5	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	63584	249.0	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	60406	129.5	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	864	3.51	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	6376	20.0	
10 Indene	116	4.682	4.682	0.0	1	57839	184.0	
11 Naphthalene	128	6.109	6.114	-0.005	1	10653	20.5	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	21092	46.1	
14 Indole	117	7.153	7.157	-0.004	1	2363	8.21	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	2453	7.21	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	3862	12.4	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	523	1.31	
18 Acenaphthylene	152	8.948	8.948	0.0	1	6521	16.1	
19 Acenaphthene	154	9.265	9.273	-0.008	4	106112	376.7	
20 Dibenzofuran	168	9.581	9.590	-0.009	1	551	1.35	
23 Phenanthrene	178	11.862	11.862	0.0	1	4014	8.72	
24 Anthracene	178	11.948	11.947	0.001	1	8134	21.3	
25 Acridine	179	12.012	12.019	-0.006	1	12449	49.5	M
26 Carbazole	167	12.246	12.246	0.0	1	2395	6.60	
27 Fluoranthene	202	13.870	13.870	0.0	1	1845	4.53	
28 Pyrene	202	14.248	14.248	0.0	6	6350	14.0	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	843	2.28	
30 Chrysene	228	16.283	16.282	0.0	1	832	1.56	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	2188	4.51	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	2234	3.83	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	836	1.74	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	1848	4.20	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	1411	3.35	
42 Dibenz(a,h)anthracene	278	19.992	19.992	0.0	1	603	1.88	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	1421	3.18	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8739.D

Injection Date: 21-Dec-2012 03:11:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: W48-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 21

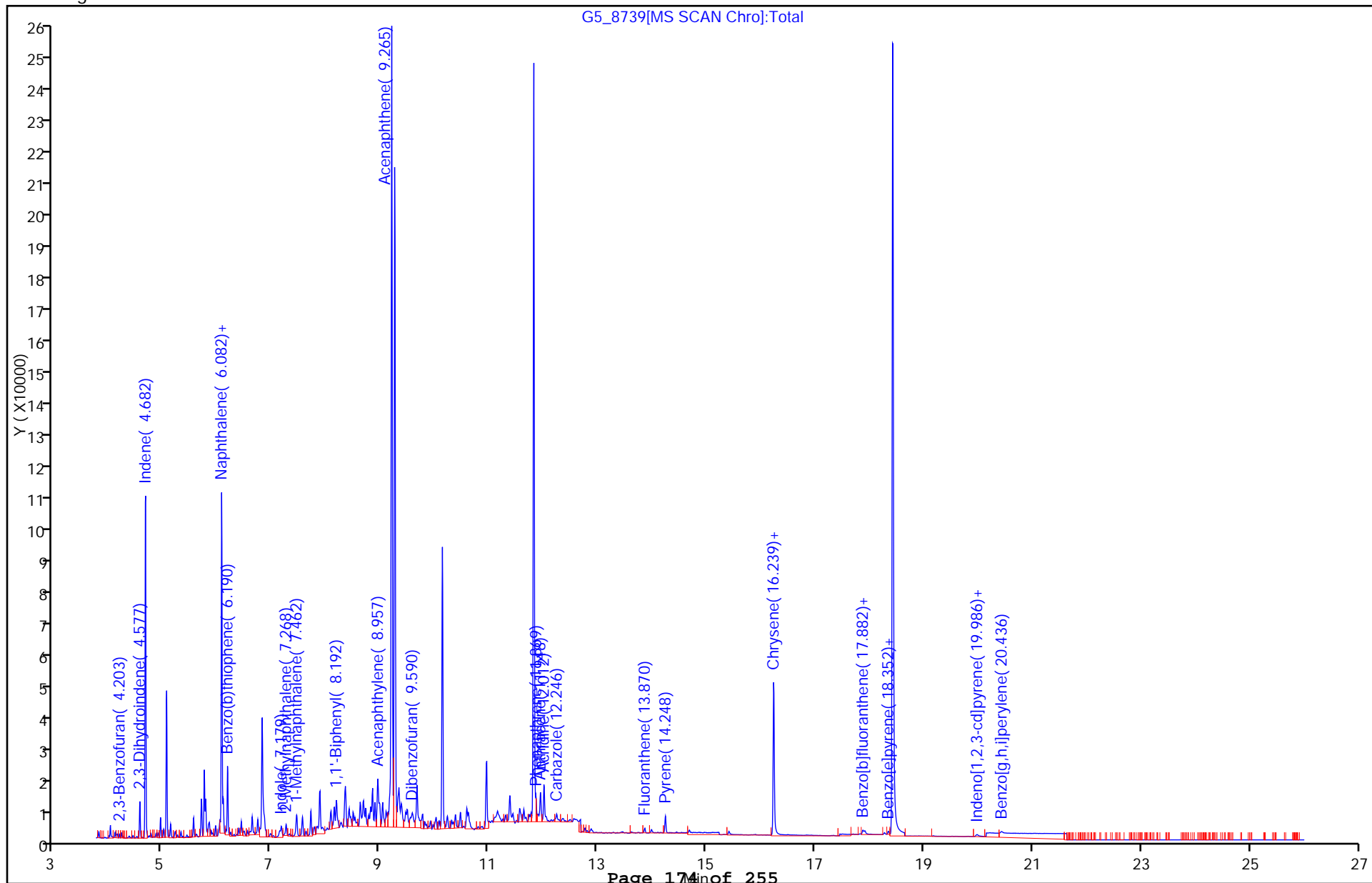
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8739.D		
Injection Date:	21-Dec-2012 03:11:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:	W48-120612	Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	21
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

Processing Integration Results

RT:	12.01
Response:	53191
Amount:	211.7094

Manual Integration Results

RT:	12.01
Response:	12449
Amount:	49.549187

Reviewer: vasquezk, 24-Dec-2012 07:42:39

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241

SDG No.: _____

Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0010 280-153241/2	G5_8720.D
Level 2	STD0020 280-153241/3	G5_8721.D
Level 3	STD0150 280-153241/4	G5_8722.D
Level 4	ICIS 280-153241/5	G5_8723.D
Level 5	STD0600 280-153241/6	G5_8724.D
Level 6	STD0800 280-153241/7	G5_8725.D
Level 7	STD1200 280-153241/8	G5_8726.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3-Benzofuran	0.8379 0.8468	0.8712 0.8619	0.8192	0.8207	0.8694	Ave		0.8467				2.6		30.0			
2,3-Dihydroindene	1.0759 1.1005	1.1204 1.1252	1.0607	1.0653	1.1281	Ave		1.0966				2.7		30.0			
Indene	1.0572 1.0905	1.1049 1.1194	1.0337	1.0424	1.1127	Ave		1.0801				3.3		30.0			
Naphthalene	1.8024 1.7980	1.8156 1.8385	1.7118	1.7253	1.8307	Ave		1.7889				2.8		30.0			
Benzo(b)thiophene	1.0064 0.9808	1.0101 1.0418	0.9398	0.9450	1.0029	Ave		0.9895				3.7		30.0			
Quinoline	0.8638 1.0166	0.9224 1.0450	0.9071	0.9249	1.0063	Ave		0.9552				7.0		30.0			
Indole	0.9042 1.0523	0.9514 1.0838	0.9306	0.9583	1.0427	Ave		0.9890				7.0		30.0			
2-Methylnaphthalene	1.1605 1.1937	1.1720 1.2250	1.1079	1.1231	1.1976	Ave		1.1685				3.6		30.0			
1-Methylnaphthalene	1.0366 1.0910	1.0755 1.1212	1.0237	1.0299	1.1021	Ave		1.0686				3.6		30.0			
Biphenyl	1.3337 1.4037	1.3743 1.4324	1.3330	1.3352	1.4058	Ave		1.3740				3.0		30.0			
Acenaphthylene	1.3100 1.4996	1.3349 1.5246	1.2823	1.3211	1.4527	Ave		1.3893				7.2		30.0			
Acenaphthene	0.9603 0.9862	0.9708 1.0138	0.9260	0.9293	0.9896	Ave		0.9680				3.3		30.0			
Dibenzofuran	1.3543 1.4476	1.4057 1.4693	1.3510	1.3562	1.4411	Ave		1.4036				3.6		30.0			
Fluorene	0.6827 0.7268	0.6738 0.7596	0.6440	0.6623	0.7217	Ave		0.6959				5.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241

SDG No.: _____

Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibenzothiophene	0.8299 0.8501	0.8405 0.8754	0.7868	0.7950	0.8578	Ave		0.8336				3.9		30.0			
Phenanthrene	1.0076 1.0051	1.0151 1.0361	0.9429	0.9465	1.0134	Ave		0.9952				3.6		30.0			
Anthracene	0.7420 0.9058	0.7510 0.9446	0.7466	0.7870	0.8891	Ave		0.8237				10.0		30.0			
Acridine	0.4151 0.6398	0.4754 0.6776	0.4642	0.5196	0.6091	Ave		0.5430				18.0		30.0			
Carbazole	0.7134 0.8713	0.6859 0.9088	0.7068	0.7546	0.8506	Ave		0.7845				12.0		30.0			
Fluoranthene	0.8364 0.9413	0.8299 0.9786	0.8083	0.8372	0.9271	Ave		0.8798				7.6		30.0			
Pyrene	0.9223 1.0635	0.9114 1.0921	0.8879	0.9328	1.0337	Ave		0.9777				8.5		30.0			
Benzo[a]anthracene	0.6702 0.6668	0.5907 0.6887	0.5591	0.5915	0.6580	Ave		0.6321				8.0		30.0			
Chrysene	0.9767 0.9185	0.9207 0.9278	0.8618	0.8650	0.9255	Ave		0.9137				4.3		30.0			
7,12-Dimethylbenz(a)anthracene	0.2391 0.3141	0.2283 0.3232	0.2435	0.2647	0.3048	Ave		0.2740				14.0		30.0			
Benzo[b]fluoranthene	0.9674 0.8496	0.7975 0.8878	0.7054	0.7593	0.8404	Ave		0.8296				10.0		30.0			
Benzo[k]fluoranthene	1.1428 0.9850	1.0360 1.0189	0.8908	0.9107	0.9941	Ave		0.9969				8.4		30.0			
Benzo[e]pyrene	0.8837 0.8451	0.8036 0.8748	0.7449	0.7721	0.8433	Ave		0.8239				6.3		30.0			
Benzo[a]pyrene	0.8989 0.7800	0.7089 0.8417	0.6133	0.6625	0.7687	Ave		0.7534				13.0		30.0			
Perylene	0.9548 0.9201	0.9548 0.9533	0.8750	0.8840	0.9500	Ave		0.9274				3.8		30.0			
3-Methylcholanthrene	0.2416 0.3513	0.2240 0.3775	0.2401	0.2746	0.3304	Ave		0.2914				21.0		30.0			
Indeno[1,2,3-cd]pyrene	0.7181 0.7828	0.6341 0.8361	0.6239	0.6751	0.7788	Ave		0.7213				11.0		30.0			
Dibenz(a,h)anthracene	0.4435 0.6341	0.4361 0.6786	0.4844	0.5340	0.6251	Ave		0.5480				18.0		30.0			
Benzo[g,h,i]perylene	0.7930 0.7942	0.7408 0.8415	0.6685	0.7132	0.7946	Ave		0.7637				7.7		30.0			
Naphthalene-d8 (Surr)	1.7497 1.7378	1.7879 1.7804	1.6691	1.6683	1.7657	Ave		1.7370				2.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241

SDG No.: _____

Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Fluorene-d10 (Surr)	0.6330 0.5498	0.5714 0.5678	0.4953	0.5057	0.5404	Ave		0.5519				8.3		30.0			
Chrysene-d12 (Surr)	0.7456	1.0906 0.7568	0.7250	0.7155	0.7555	Ave		0.7982				18.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241

SDG No.: _____

Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0010 280-153241/2	G5_8720.D
Level 2	STD0020 280-153241/3	G5_8721.D
Level 3	STD0150 280-153241/4	G5_8722.D
Level 4	ICIS 280-153241/5	G5_8723.D
Level 5	STD0600 280-153241/6	G5_8724.D
Level 6	STD0800 280-153241/7	G5_8725.D
Level 7	STD1200 280-153241/8	G5_8726.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
2,3-Benzofuran	ANT	Ave	2197 193256	4625 295088	32927	68808	138584	10.1 800	19.9 1200	150	300	600
2,3-Dihydroindene	ANT	Ave	2821 251151	5948 385253	42631	89314	179819	10.1 800	19.9 1200	150	300	600
Indene	ANT	Ave	2772 248858	5866 383271	41548	87391	177364	10.1 800	19.9 1200	150	300	600
Naphthalene	ANT	Ave	4726 410324	9639 629456	68803	144647	291814	10.1 800	19.9 1200	150	300	600
Benzo(b)thiophene	PHN	Ave	4008 357180	8364 551649	60026	125422	253375	10.1 800	19.9 1200	150	300	600
Quinoline	ANT	Ave	2265 231999	4897 357799	36457	77542	160398	10.1 800	19.9 1200	150	300	600
Indole	ANT	Ave	2371 240136	5051 371070	37402	80341	166212	10.1 800	19.9 1200	150	300	600
2-Methylnaphthalene	ANT	Ave	3043 272415	6222 419399	44528	94163	190898	10.1 800	19.9 1200	150	300	600
1-Methylnaphthalene	ANT	Ave	2718 248983	5710 383888	41147	86346	175679	10.1 800	19.9 1200	150	300	600
Biphenyl	ANT	Ave	3497 320325	7296 490433	53575	111939	224086	10.1 800	19.9 1200	150	300	600
Acenaphthylene	ANT	Ave	3435 342231	7087 521971	51539	110757	231569	10.1 800	19.9 1200	150	300	600
Acenaphthene	ANT	Ave	2518 225066	5154 347096	37219	77909	157749	10.1 800	19.9 1200	150	300	600
Dibenzofuran	ANT	Ave	3551 330359	7463 503046	54301	113701	229712	10.1 800	19.9 1200	150	300	600
Fluorene	PHN	Ave	2719 264675	5580 402223	41132	87899	182351	10.1 800	19.9 1200	150	300	600
Dibenzothiophene	PHN	Ave	3305 309572	6960 463527	50256	105505	216719	10.1 800	19.9 1200	150	300	600

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241

SDG No.: _____

Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Phenanthrene	PHN	Ave	4013 366032	8406 548658	60224	125613	256025	10.1 800	19.9 1200	150	300	600
Anthracene	PHN	Ave	2955 329869	6219 500180	47689	104446	224633	10.1 800	19.9 1200	150	300	600
Acridine	PHN	Ave	1653 232994	3937 358808	29651	68961	153894	10.1 800	19.9 1200	150	300	600
Carbazole	PHN	Ave	2841 317308	5680 481205	45147	100151	214894	10.1 800	19.9 1200	150	300	600
Fluoranthene	PHN	Ave	3331 342804	6872 518175	51627	111105	234224	10.1 800	19.9 1200	150	300	600
Pyrene	PHN	Ave	3673 387296	7547 578309	56712	123792	261179	10.1 800	19.9 1200	150	300	600
Benzo[a]anthracene	PRY	Ave	2962 303585	5465 464412	40861	93356	204694	10.1 800	19.9 1200	150	300	600
Chrysene	PRY	Ave	4317 418206	8518 625622	62981	136528	287912	10.1 800	19.9 1200	150	300	600
7,12-Dimethylbenz(a)anthracene	PRY	Ave	1057 143031	2112 217927	17795	41771	94807	10.1 800	19.9 1200	150	300	600
Benzo[b]fluoranthene	PRY	Ave	4276 386821	7378 598649	51553	119845	261439	10.1 800	19.9 1200	150	300	600
Benzo[k]fluoranthene	PRY	Ave	5051 448470	9585 687069	65100	143731	309266	10.1 800	19.9 1200	150	300	600
Benzo[e]pyrene	PRY	Ave	3906 384786	7435 589930	54440	121865	262336	10.1 800	19.9 1200	150	300	600
Benzo[a]pyrene	PRY	Ave	3973 355126	6559 567621	44821	104555	239123	10.1 800	19.9 1200	150	300	600
Perylene	PRY	Ave	4220 418953	8834 642839	63947	139518	295542	10.1 800	19.9 1200	150	300	600
3-Methylcholanthrene	PRY	Ave	1068 159938	2072 254576	17548	43342	102772	10.1 800	19.9 1200	150	300	600
Indeno[1,2,3-cd]pyrene	PRY	Ave	3174 356430	5867 563810	45596	106556	242275	10.1 800	19.9 1200	150	300	600
Dibenz(a,h)anthracene	PRY	Ave	1960 288713	4035 457613	35396	84280	194459	10.1 800	19.9 1200	150	300	600
Benzo[g,h,i]perylene	PRY	Ave	3505 361614	6854 567472	48854	112567	247175	10.1 800	19.9 1200	150	300	600
Naphthalene-d8 (Surr)	ANT	Ave	4588 396581	9492 609559	67086	139866	281452	10.1 800	19.9 1200	150	300	600
Fluorene-d10 (Surr)	PHN	Ave	2521 200225	4732 300654	31636	67118	136526	10.1 800	19.9 1200	150	300	600
Chrysene-d12 (Surr)	PRY	Ave	10090 339493	510311	52984	112926	235020	800	19.9 1200	150	300	600

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-36732-1 Analy Batch No.: 153241
SDG No.: _____
Instrument ID: SMS_G5 GC Column: Vf-5MS ID: 0.25 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 12/20/2012 15:49 Calibration End Date: 12/20/2012 19:28 Calibration ID: 12199

Curve Type Legend:

Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8720.D
 Lims ID: STD0010 Client ID:
 Inject. Date: 20-Dec-2012 15:49:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 1
 Sample ID: STD0010
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 1
 Lims Batch ID: 153241 Lims Sample ID: 2
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:46 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 20-Dec-2012 16:25:23

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	156077	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	237058	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	263088	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.087	6.081	0.006	1	4588	10.2	
\$ 5 Fluorene-d10 (Surr)	176	10.149	10.144	0.005	0	2521	11.6	
\$ 6 Chrysene-d12 (Surr)	240	16.244	16.239	0.005	1	6586	18.8	M
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	2197	9.97	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	2821	9.89	
10 Indene	116	4.682	4.682	0.0	1	2772	9.87	
11 Naphthalene	128	6.114	6.114	0.0	1	4726	10.2	
12 Benzo(b)thiophene	134	6.195	6.190	0.005	1	4008	10.3	
13 Quinoline	129	6.633	6.628	0.005	4	2265	9.12	
14 Indole	117	7.160	7.157	0.003	1	2371	9.22	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	3043	10.0	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	2718	9.78	
17 1,1'-Biphenyl	154	8.156	8.147	0.009	1	3497	9.78	
18 Acenaphthylene	152	8.957	8.948	0.009	2	3435	9.50	
19 Acenaphthene	154	9.273	9.273	0.0	3	2518	10.0	
20 Dibenzofuran	168	9.590	9.590	0.0	1	3551	9.73	
21 Fluorene	166	10.198	10.198	0.0	1	2719	9.89	
22 Dibenzothiophene	184	11.656	11.649	0.007	1	3305	10.0	
23 Phenanthrene	178	11.862	11.862	0.0	1	4013	10.2	
24 Anthracene	178	11.954	11.947	0.007	1	2955	9.08	
25 Acridine	179	12.018	12.019	0.0	1	1653	7.71	M
26 Carbazole	167	12.253	12.246	0.007	1	2841	9.17	
27 Fluoranthene	202	13.873	13.870	0.003	1	3331	9.58	
28 Pyrene	202	14.252	14.248	0.004	6	3673	9.51	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	2962	10.7	
30 Chrysene	228	16.282	16.282	0.0	1	4317	10.8	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.001	17.001	0.0	1	2267	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	1057	8.80	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	4276	11.8	
34 Benzo[k]fluoranthene	252	17.919	17.920	-0.001	1	5051	11.6	
35 Benzo[e]pyrene	252	18.283	18.277	0.006	1	3906	10.8	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	3973	12.0	
37 Perylene	252	18.471	18.465	0.006	1	4220	10.4	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	1068	8.36	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	1007	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	1336	0	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	3174	10.0	
42 Dibenzo(a,h)anthracene	278	19.998	19.992	0.006	1	1960	8.16	
44 Benzo[g,h,i]perylene	276	20.441	20.436	0.005	1	3505	10.5	
45 Dibenzo(def,p)chrysene	302	22.822	22.830	-0.008	1	723	0	
46 Dibenzo[a,e]pyrene	302	23.761	23.757	0.004	0	998	0	M
47 1,2:7,8-Dibenzpyrene	302	24.127	24.135	-0.008	1	310	0	M
S 48 Benzofluoranthene	1				0		23.3	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8720.D

Injection Date: 20-Dec-2012 15:49:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 2

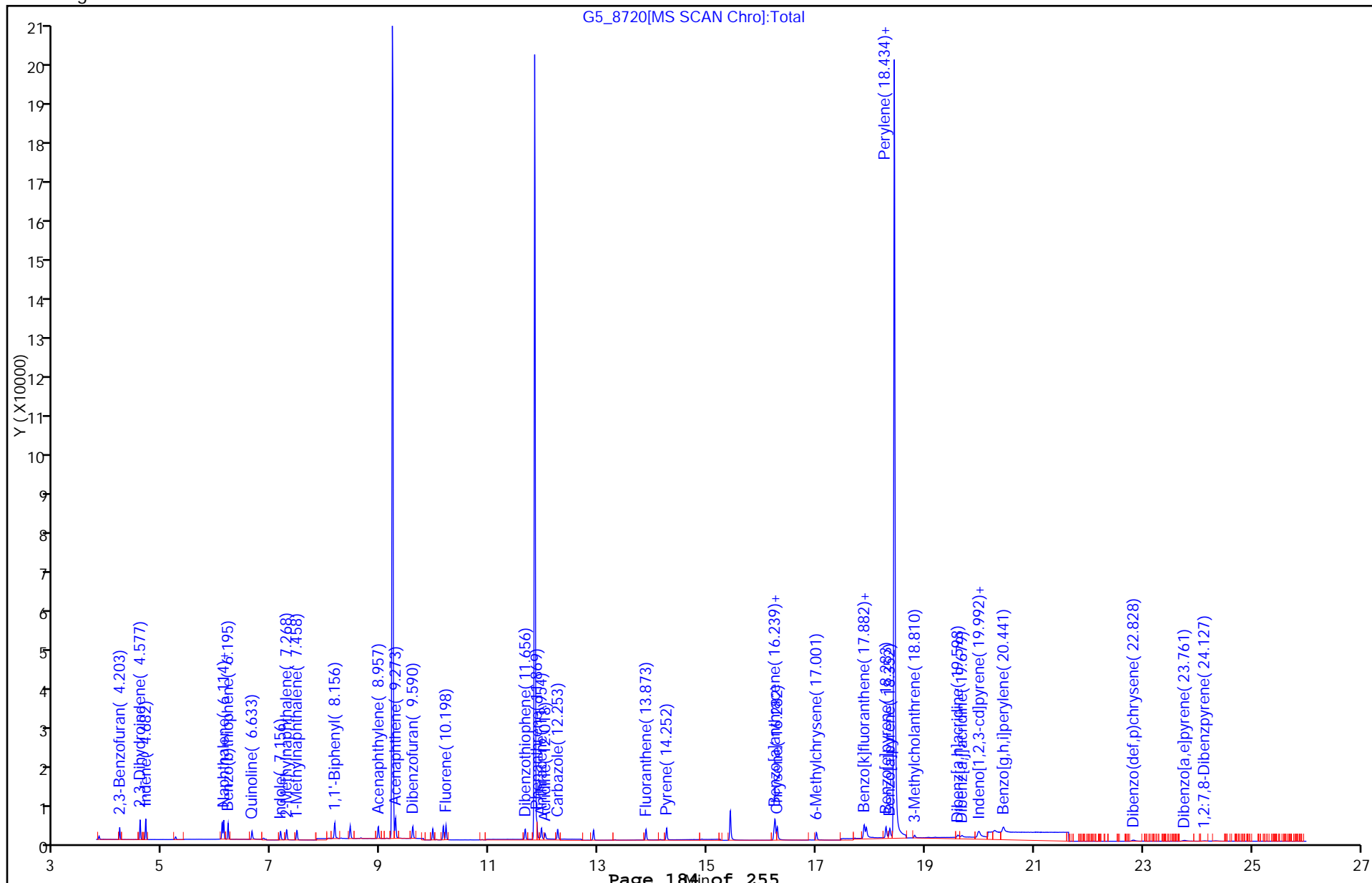
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



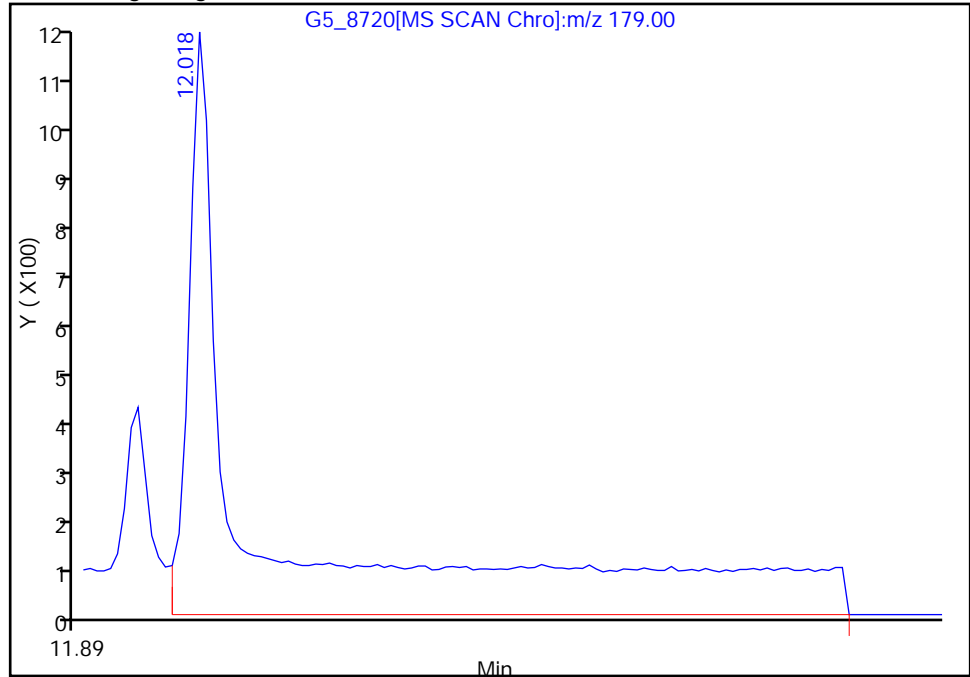
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8720.D		
Injection Date:	20-Dec-2012 15:49:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:		Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	2
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

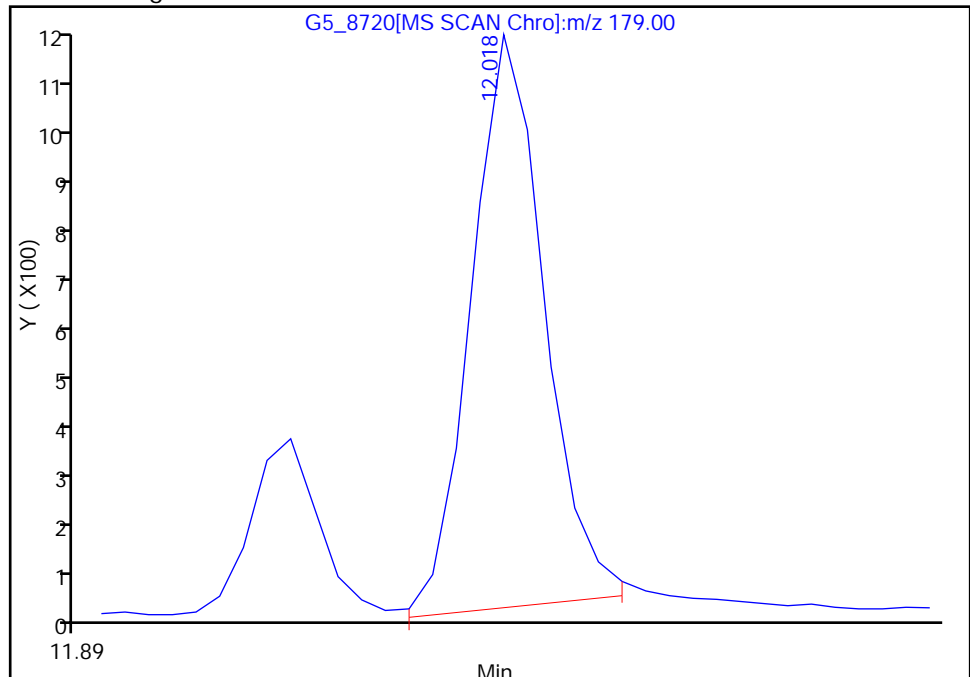
RT: 12.02
Response: 5760
Amount: 50.987056

Processing Integration Results



RT: 12.02
Response: 1653
Amount: 7.705249

Manual Integration Results



Reviewer: vasquezk, 20-Dec-2012 16:25:23
Audit Action: Manually Integrated
Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8721.D
 Lims ID: STD0020 Client ID:
 Inject. Date: 20-Dec-2012 16:30:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 2
 Sample ID: STD0020
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 2
 Lims Batch ID: 153241 Lims Sample ID: 3
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:47 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:52:49

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	159909	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	249421	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	278672	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.087	6.081	0.006	1	9492	20.5	
\$ 5 Fluorene-d10 (Surr)	176	10.149	10.144	0.005	0	4732	20.6	
\$ 6 Chrysene-d12 (Surr)	240	16.245	16.239	0.006	1	10090	27.2	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	4625	20.5	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	5948	20.4	
10 Indene	116	4.682	4.682	0.0	1	5866	20.4	
11 Naphthalene	128	6.114	6.114	0.0	1	9639	20.2	
12 Benzo(b)thiophene	134	6.195	6.190	0.005	1	8364	20.3	
13 Quinoline	129	6.633	6.628	0.005	5	4897	19.2	
14 Indole	117	7.157	7.157	0.0	1	5051	19.2	
15 2-Methylnaphthalene	142	7.272	7.268	0.004	1	6222	20.0	
16 1-Methylnaphthalene	142	7.461	7.458	0.003	1	5710	20.0	
17 1,1'-Biphenyl	154	8.156	8.147	0.009	1	7296	19.9	
18 Acenaphthylene	152	8.957	8.948	0.009	2	7087	19.1	
19 Acenaphthene	154	9.273	9.273	0.0	3	5154	20.0	
20 Dibenzofuran	168	9.590	9.590	0.0	1	7463	20.0	
21 Fluorene	166	10.198	10.198	0.0	1	5580	19.3	
22 Dibenzothiophene	184	11.656	11.649	0.007	1	6960	20.1	
23 Phenanthrene	178	11.862	11.862	0.0	1	8406	20.3	
24 Anthracene	178	11.955	11.947	0.008	1	6219	18.2	
25 Acridine	179	12.019	12.019	0.001	1	3937	17.4	M
26 Carbazole	167	12.253	12.246	0.007	1	5680	17.4	
27 Fluoranthene	202	13.874	13.870	0.004	1	6872	18.8	
28 Pyrene	202	14.252	14.248	0.004	6	7547	18.6	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	5465	18.6	
30 Chrysene	228	16.282	16.282	0.0	1	8518	20.1	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.007	17.001	0.006	1	4712	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	2112	16.6	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	7378	19.1	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	9585	20.7	
35 Benzo[e]pyrene	252	18.283	18.277	0.006	1	7435	19.4	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	6559	18.7	
37 Perylene	252	18.471	18.465	0.006	1	8834	20.5	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	2072	15.3	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	1880	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	2732	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	5867	17.5	
42 Dibenzo(a,h)anthracene	278	19.998	19.992	0.006	1	4035	15.9	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	6854	19.3	
45 Dibenzo(def,p)chrysene	302	22.826	22.830	-0.004	1	2131	0	
46 Dibenzo[a,e]pyrene	302	23.759	23.757	0.002	1	2190	0	M
47 1,2:7,8-Dibenzpyrene	302	24.136	24.135	0.001	0	788	0	M
S 48 Benzofluoranthene	1				0		39.8	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8721.D

Injection Date: 20-Dec-2012 16:30:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 3

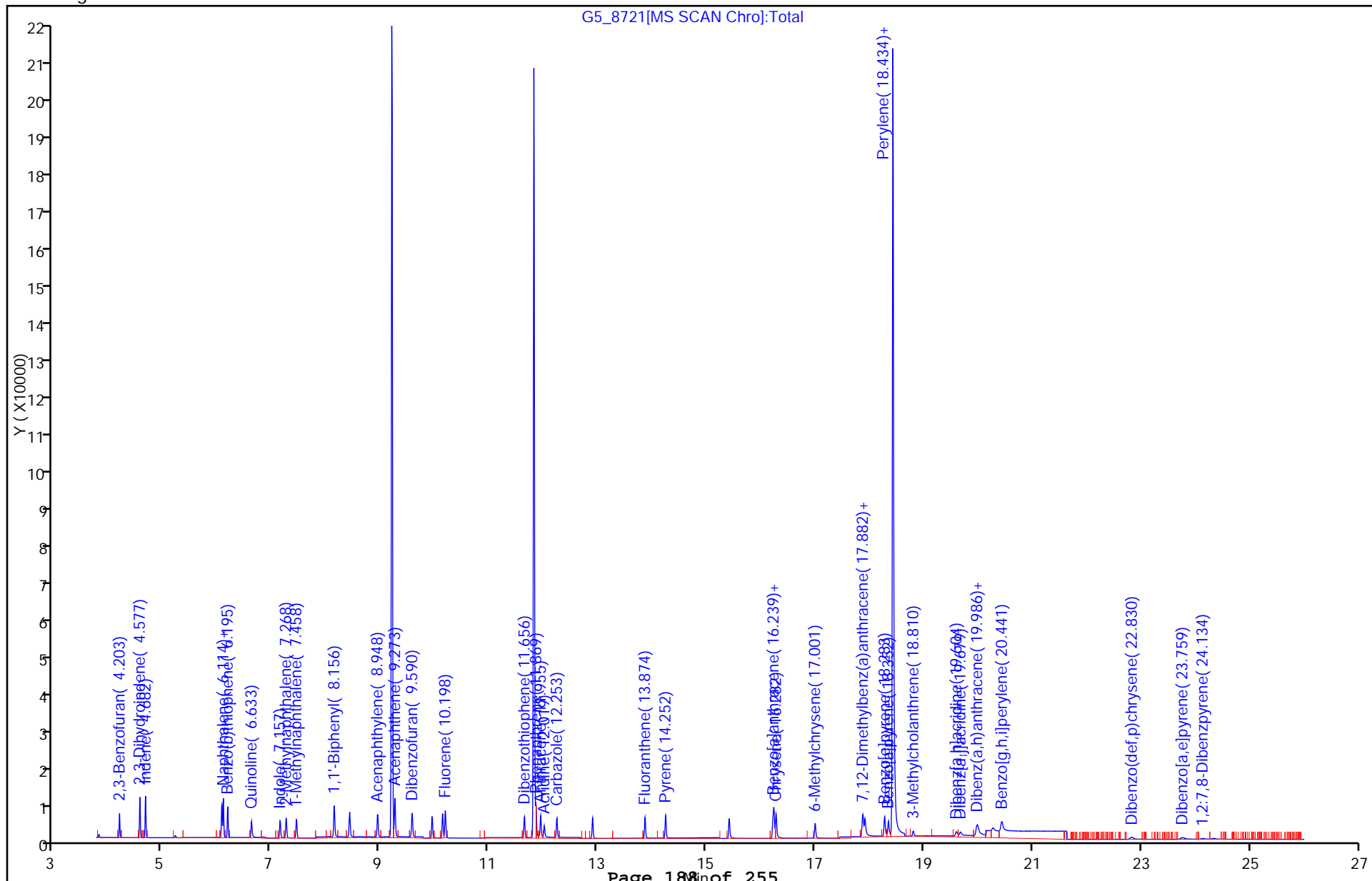
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



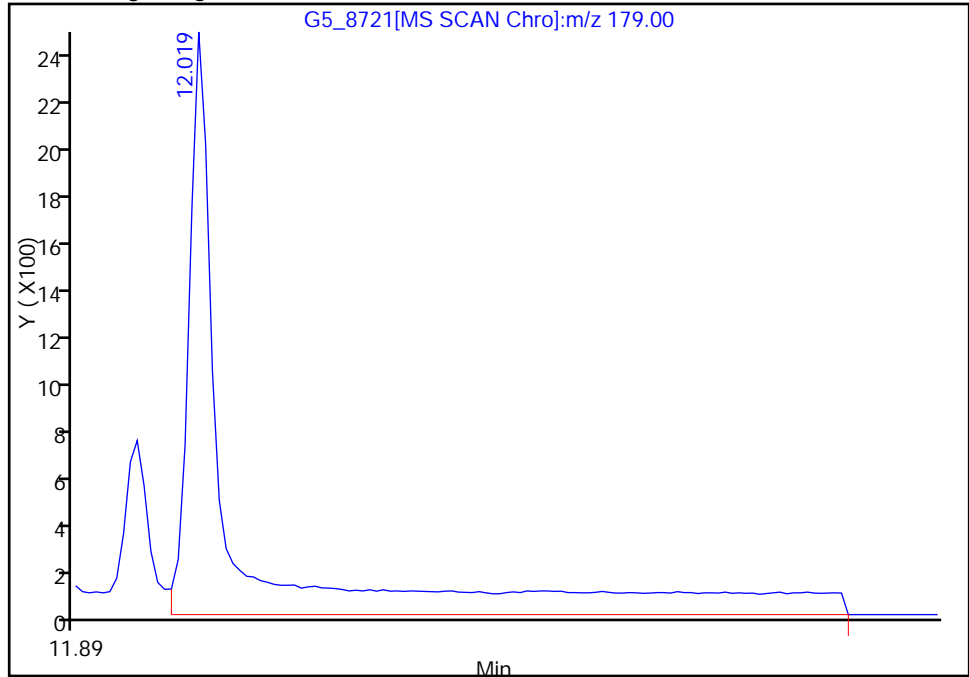
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8721.D		
Injection Date:	20-Dec-2012 16:30:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:		Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	3
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

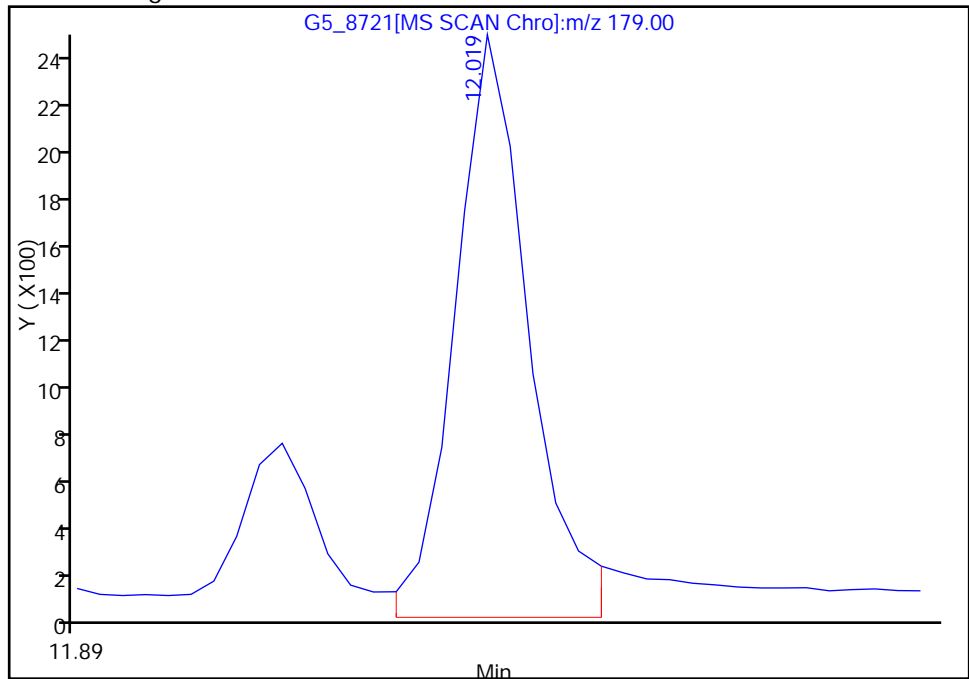
RT: 12.02
Response: 7762
Amount: 17.486923

Processing Integration Results



RT: 12.02
Response: 3937
Amount: 17.442184

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:52:49
Audit Action: Split an Integrated Peak
Audit Reason: Peak Tail

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8721.D

Injection Date: 20-Dec-2012 16:30:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 3

Operator ID: vasquezk

Injection Vol: 1.0 ul

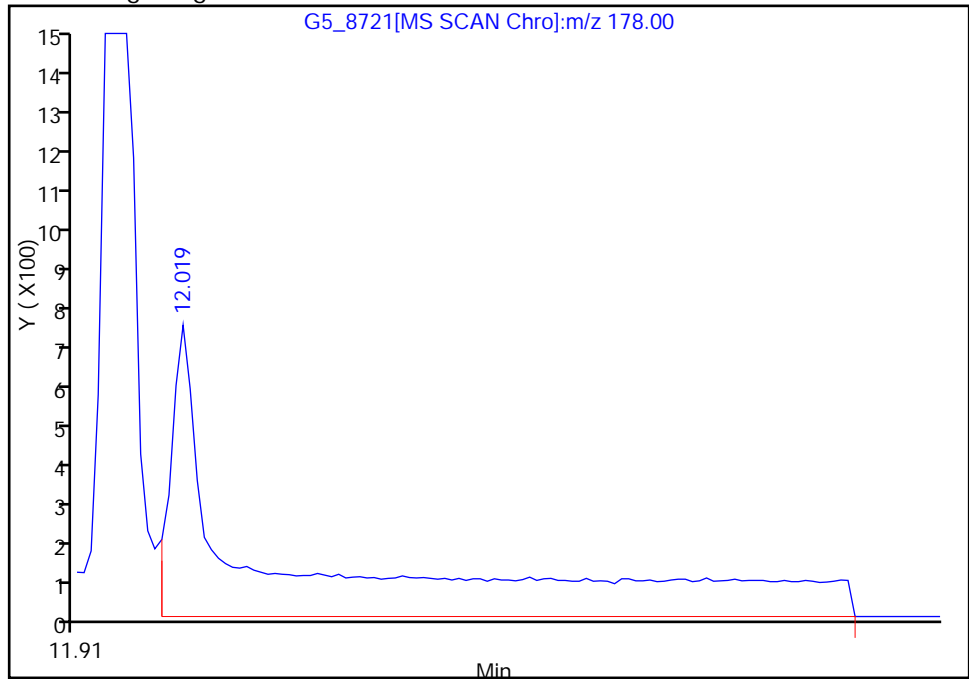
Column Type:

Column Dia:

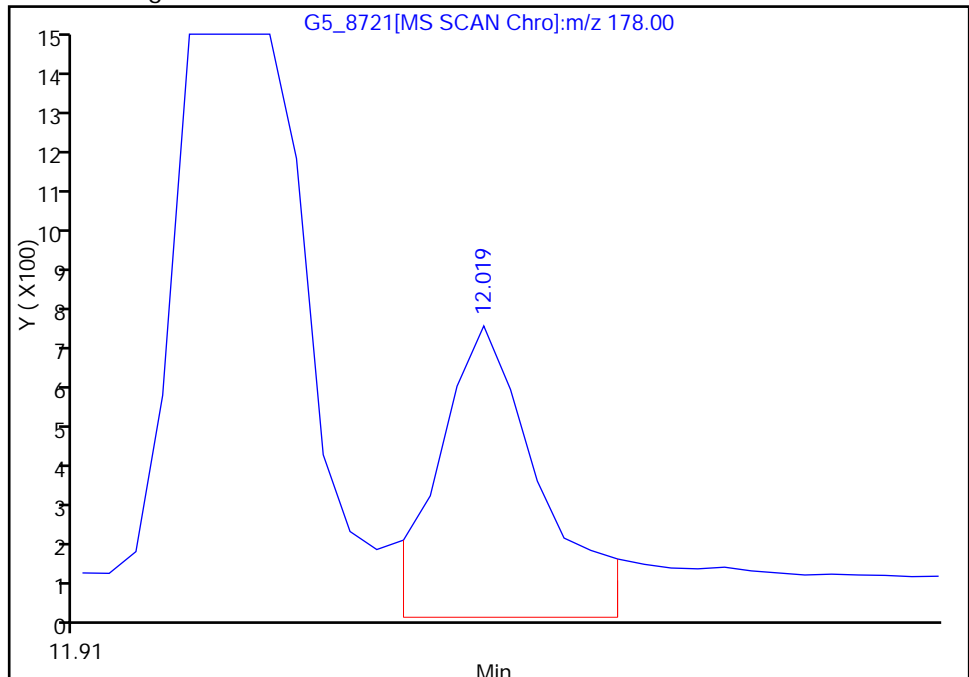
25 Acridine, Signal: 2, m/z: 178.0 Type: monitor, RT: 12.02

RT: 12.02
Response: 4864
Amount: 0

Processing Integration Results

RT: 12.02
Response: 1340
Amount: 0

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:52:49

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8722.D
 Lims ID: STD0150 Client ID:
 Inject. Date: 20-Dec-2012 17:06:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 3
 Sample ID: STD0150
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 3
 Lims Batch ID: 153241 Lims Sample ID: 4
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:48 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:53:32

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	160770	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	255486	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	292315	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	67086	144.1	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	31636	134.6	
\$ 6 Chrysene-d12 (Surr)	240	16.245	16.239	0.006	1	52984	136.3	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	32927	145.1	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	42631	145.1	
10 Indene	116	4.682	4.682	0.0	1	41548	143.6	
11 Naphthalene	128	6.114	6.114	0.0	1	68803	143.5	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	60026	142.5	
13 Quinoline	129	6.628	6.628	0.0	5	36457	142.4	
14 Indole	117	7.157	7.157	0.0	1	37402	141.1	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	44528	142.2	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	41147	143.7	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	53575	145.5	
18 Acenaphthylene	152	8.948	8.948	0.0	2	51539	138.4	
19 Acenaphthene	154	9.273	9.273	0.0	4	37219	143.5	
20 Dibenzofuran	168	9.590	9.590	0.0	1	54301	144.4	
21 Fluorene	166	10.198	10.198	0.0	1	41132	138.8	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	50256	141.6	
23 Phenanthrene	178	11.862	11.862	0.0	1	60224	142.1	
24 Anthracene	178	11.948	11.947	0.001	1	47689	136.0	
25 Acridine	179	12.019	12.019	0.001	1	29651	128.2	M
26 Carbazole	167	12.246	12.246	0.0	1	45147	135.2	
27 Fluoranthene	202	13.870	13.870	0.0	1	51627	137.8	
28 Pyrene	202	14.248	14.248	0.0	6	56712	136.2	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	40861	132.7	
30 Chrysene	228	16.282	16.282	0.0	1	62981	141.5	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.001	17.001	0.0	1	38015	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	17795	133.3	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	51553	127.5	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	65100	134.0	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	54440	135.6	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	44821	122.1	
37 Perylene	252	18.465	18.465	0.0	1	63947	141.5	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	17548	123.6	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	15666	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	26578	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	45596	129.8	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	35396	132.6	
43 7H-Dibenzo[c,g]carbazole	267	20.279	20.279	0.0	1	15479	0	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	48854	131.3	
45 Dibenzo(def,p)chrysene	302	22.824	22.830	-0.006	1	18402	0	
46 Dibenzo[a,e]pyrene	302	23.759	23.757	0.002	1	19732	0	
47 1,2:7,8-Dibenzpyrene	302	24.128	24.135	-0.007	0	5161	0	M
S 48 Benzofluoranthene	1				0		261.6	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8722.D

Injection Date: 20-Dec-2012 17:06:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 4

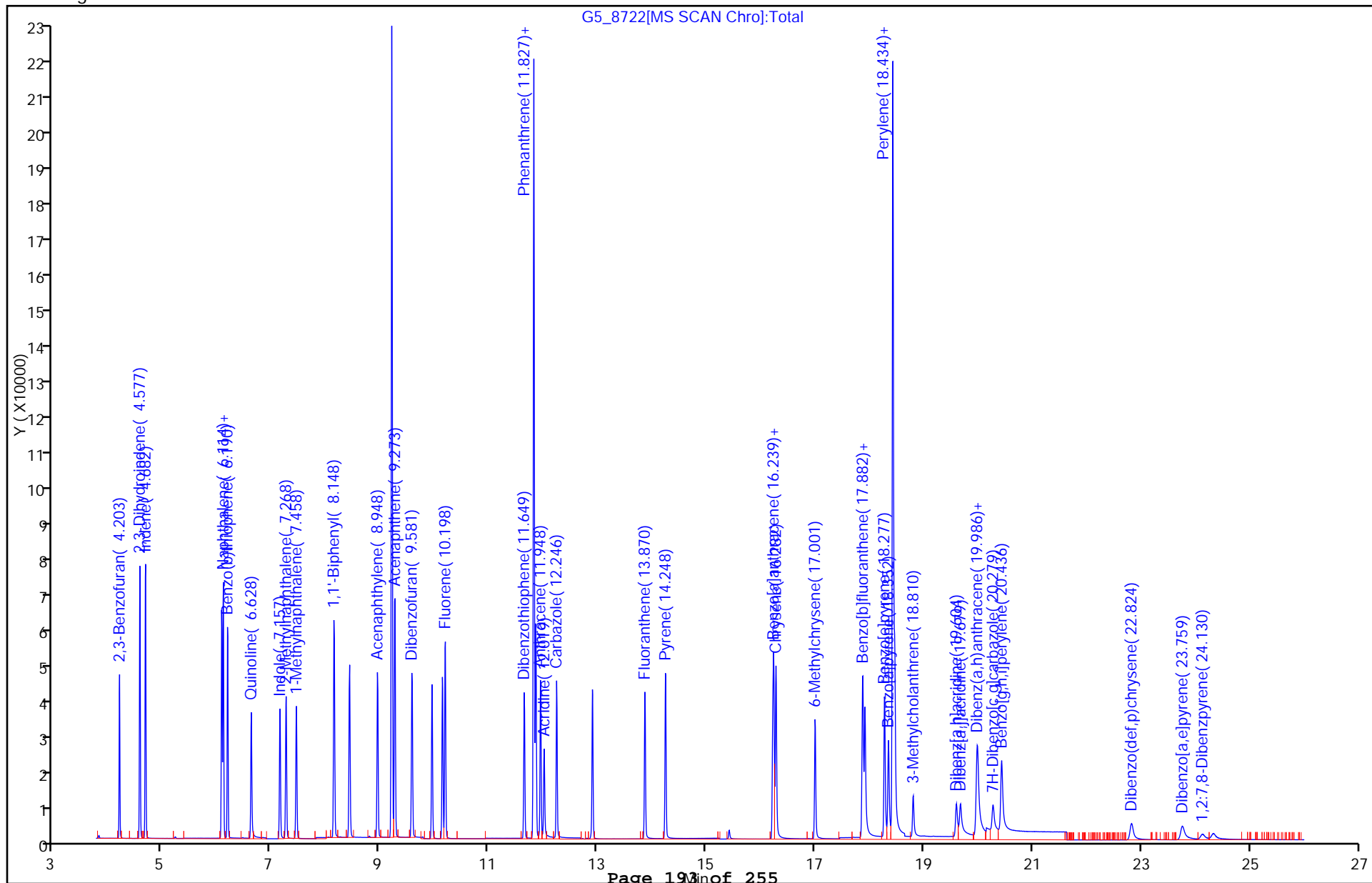
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8722.D

Injection Date: 20-Dec-2012 17:06:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 4

Operator ID: vasquezk

Injection Vol: 1.0 ul

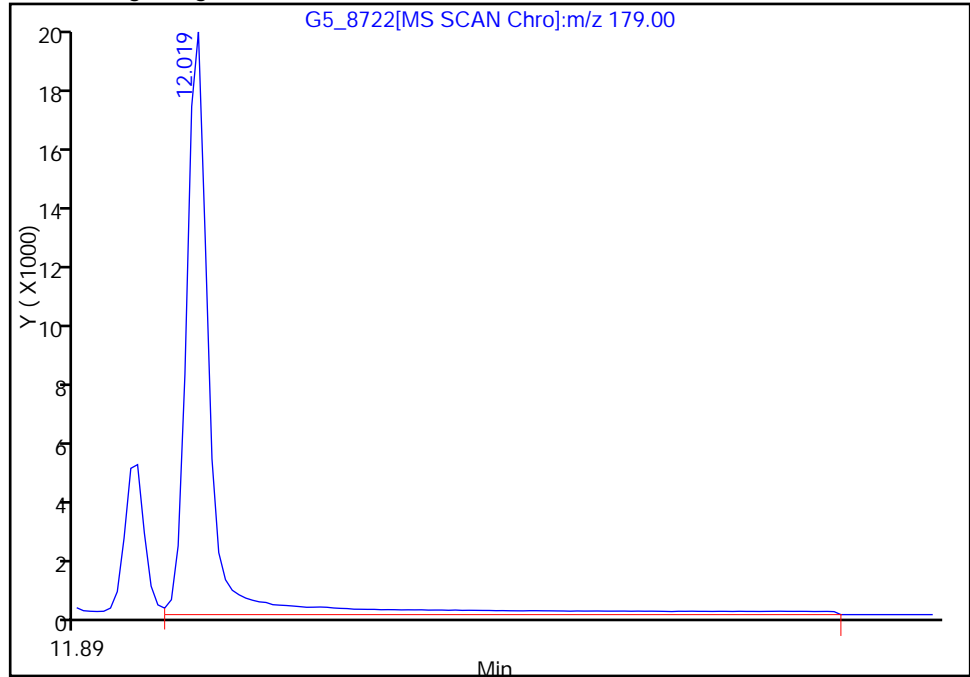
Column Type:

Column Dia:

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

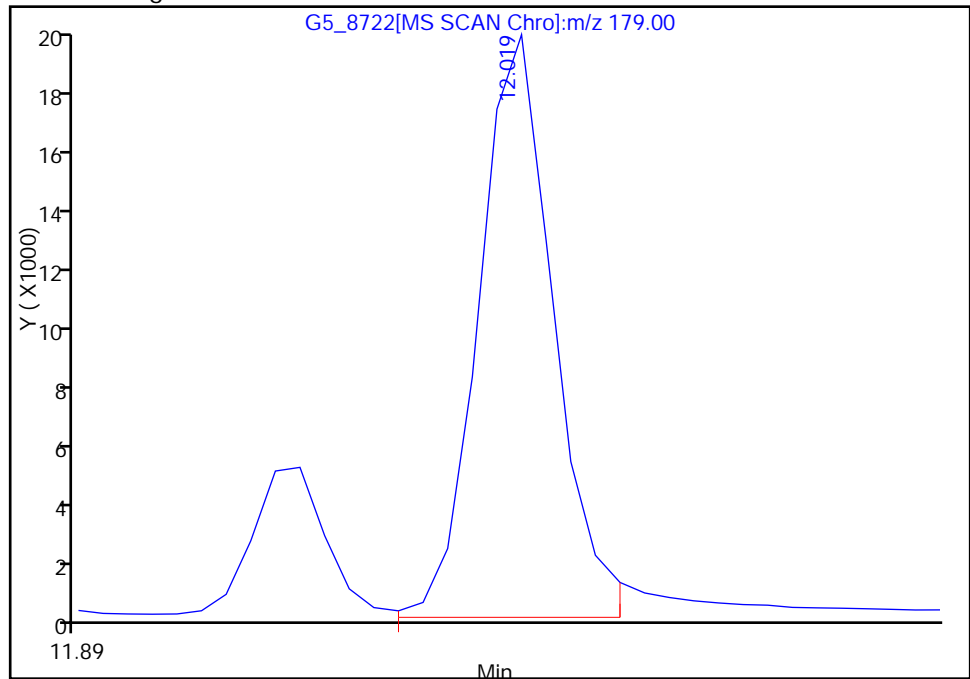
RT: 12.02
Response: 36423
Amount: 136.1760

Processing Integration Results



RT: 12.02
Response: 29651
Amount: 128.2451

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:53:32

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8723.D
 Lims ID: ICIS Client ID:
 Inject. Date: 20-Dec-2012 17:41:30 Dil. Factor: 1.0000
 Sample Type: ICIS Calib Level: 4
 Sample ID: ICIS
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 4
 Lims Batch ID: 153241 Lims Sample ID: 5
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:49 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:54:14

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	167679	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	265432	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	315656	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	139866	288.1	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	67118	274.9	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	112926	268.9	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	68808	290.8	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	89314	291.4	
10 Indene	116	4.682	4.682	0.0	1	87391	289.5	
11 Naphthalene	128	6.114	6.114	0.0	1	144647	289.3	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	125422	286.5	
13 Quinoline	129	6.628	6.628	0.0	5	77542	290.5	
14 Indole	117	7.157	7.157	0.0	1	80341	290.7	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	94163	288.3	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	86346	289.1	
17 1,1'-Biphenyl	154	8.147	8.147	0.0	1	111939	291.5	
18 Acenaphthylene	152	8.948	8.948	0.0	2	110757	285.3	
19 Acenaphthene	154	9.273	9.273	0.0	3	77909	288.0	
20 Dibenzofuran	168	9.590	9.590	0.0	1	113701	289.9	
21 Fluorene	166	10.198	10.198	0.0	1	87899	285.5	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	105505	286.1	
23 Phenanthrene	178	11.862	11.862	0.0	1	125613	285.3	
24 Anthracene	178	11.947	11.947	0.0	1	104446	286.6	
25 Acridine	179	12.019	12.019	0.0	1	68961	287.1	M
26 Carbazole	167	12.246	12.246	0.0	1	100151	288.6	
27 Fluoranthene	202	13.870	13.870	0.0	1	111105	285.5	
28 Pyrene	202	14.248	14.248	0.0	6	123792	286.2	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	93356	280.7	
30 Chrysene	228	16.282	16.282	0.0	1	136528	284.0	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.001	17.001	0.0	1	86260	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	41771	289.8	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	119845	274.6	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	143731	274.1	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	121865	281.1	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	104555	263.8	
37 Perylene	252	18.465	18.465	0.0	1	139518	285.9	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	43342	282.8	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	38549	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	68465	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	106556	280.8	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	84280	292.4	
43 7H-Dibenzo[c,g]carbazole	267	20.279	20.279	0.0	1	40577	0	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	112567	280.2	
45 Dibenzo(def,p)chrysene	302	22.830	22.830	0.0	1	44144	0	
46 Dibenzo[a,e]pyrene	302	23.757	23.757	0.0	1	48199	0	
47 1,2:7,8-Dibenzpyrene	302	24.135	24.135	0.0	0	15418	0	M
S 48 Benzofluoranthene	1				0		548.6	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8723.D

Injection Date: 20-Dec-2012 17:41:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 5

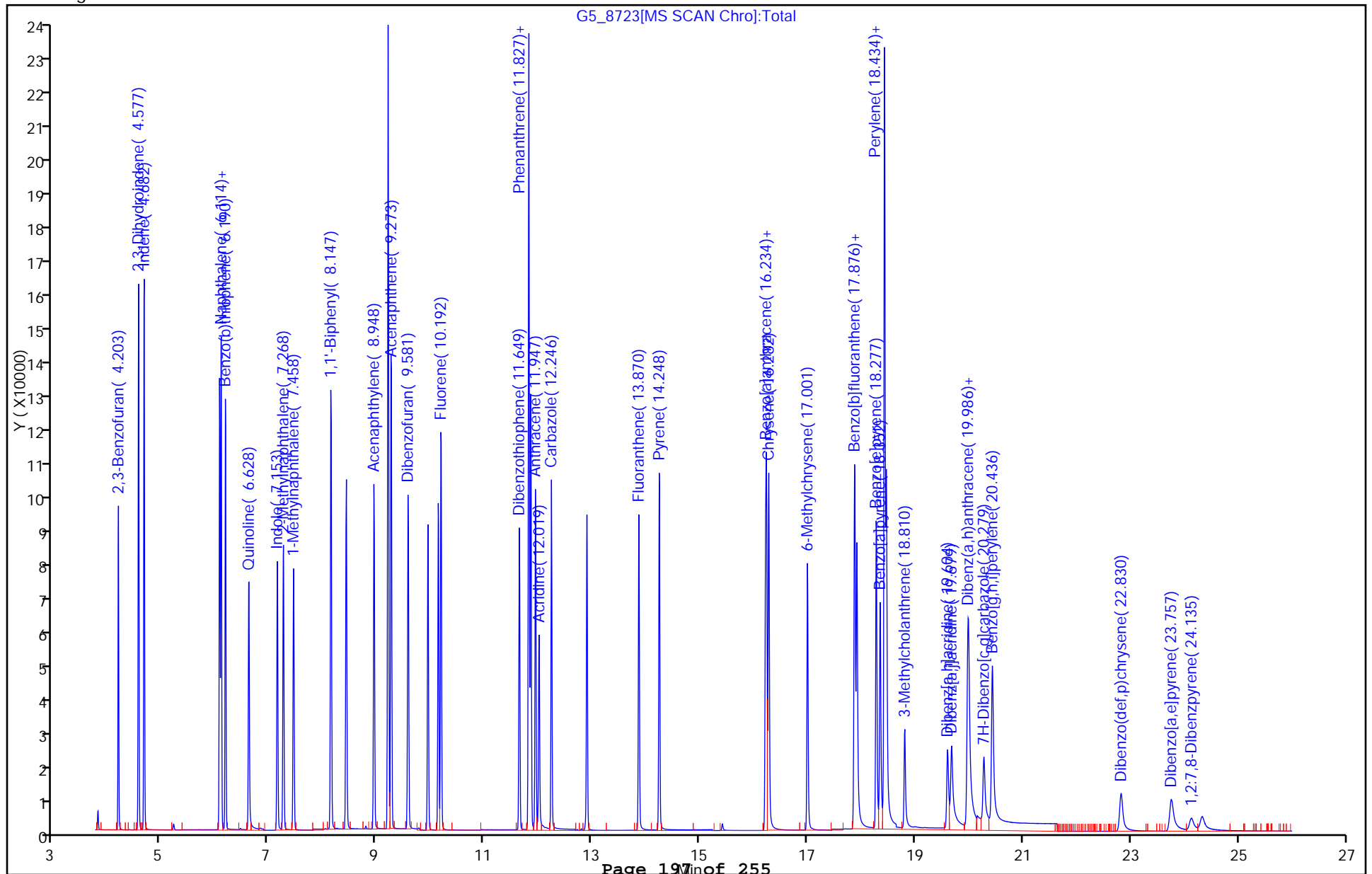
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8723.D

Injection Date: 20-Dec-2012 17:41:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 5

Operator ID: vasquezk

Injection Vol: 1.0 ul

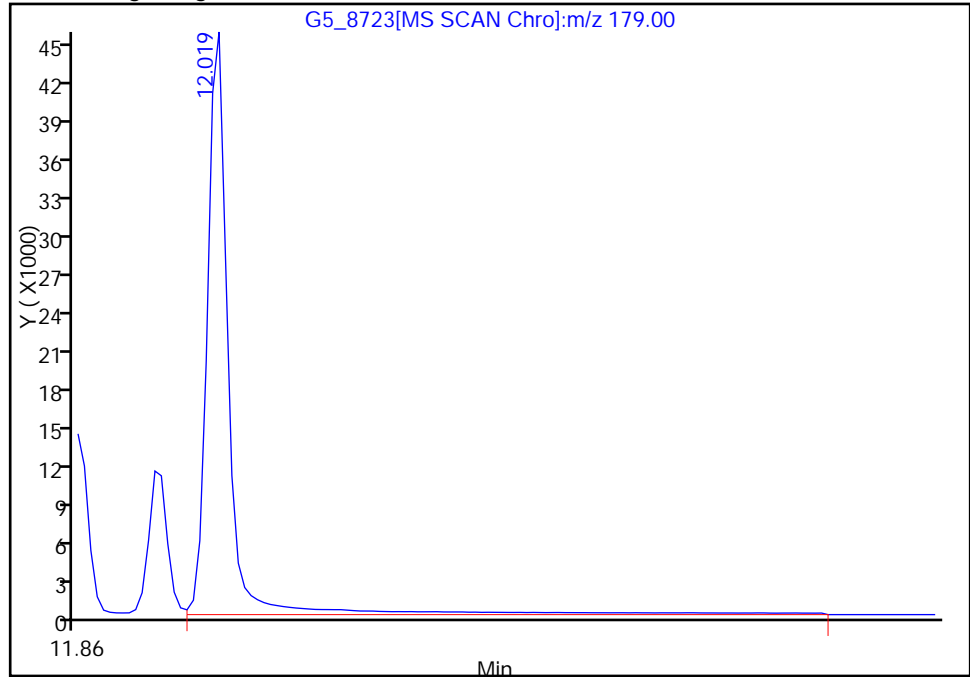
Column Type:

Column Dia:

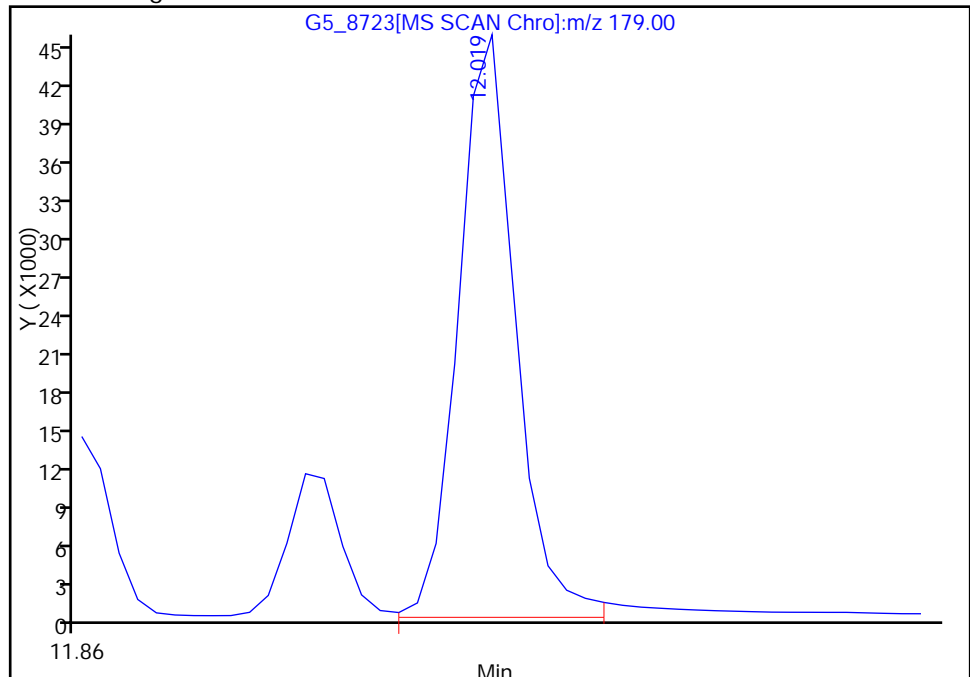
25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

RT: 12.02
Response: 77400
Amount: 300.2275

Processing Integration Results

RT: 12.02
Response: 68961
Amount: 287.0904

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:54:14

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8724.D
 Lims ID: STD0600 Client ID:
 Inject. Date: 20-Dec-2012 18:17:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 5
 Sample ID: STD0600
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 5
 Lims Batch ID: 153241 Lims Sample ID: 6
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:50 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:54:52

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	159401	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	252652	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	311088	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	281452	609.9	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	136526	587.4	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	235020	567.9	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	138584	616.1	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	179819	617.2	
10 Indene	116	4.682	4.682	0.0	1	177364	618.1	
11 Naphthalene	128	6.114	6.114	0.0	1	291814	614.0	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	253375	608.1	
13 Quinoline	129	6.623	6.628	-0.005	5	160398	632.1	
14 Indole	117	7.153	7.157	-0.004	1	166212	632.6	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	190898	614.9	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	175679	618.8	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	224086	613.9	
18 Acenaphthylene	152	8.948	8.948	0.0	2	231569	627.4	
19 Acenaphthene	154	9.273	9.273	0.0	3	157749	613.4	
20 Dibenzofuran	168	9.590	9.590	0.0	1	229712	616.0	
21 Fluorene	166	10.198	10.198	0.0	1	182351	622.3	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	216719	617.4	
23 Phenanthrene	178	11.862	11.862	0.0	1	256025	610.9	
24 Anthracene	178	11.948	11.947	0.001	1	224633	647.6	
25 Acridine	179	12.019	12.019	0.001	1	153894	673.1	M
26 Carbazole	167	12.246	12.246	0.0	1	214894	650.5	
27 Fluoranthene	202	13.870	13.870	0.0	1	234224	632.2	
28 Pyrene	202	14.248	14.248	0.0	6	261179	634.4	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	204694	624.5	
30 Chrysene	228	16.282	16.282	0.0	1	287912	607.7	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.001	17.001	0.0	1	184498	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	94807	667.5	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	261439	607.8	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	309266	598.3	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	262336	614.1	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	239123	612.1	
37 Perylene	252	18.465	18.465	0.0	1	295542	614.6	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	102772	680.3	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	94731	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	168139	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	242275	647.8	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	194459	684.5	
43 7H-Dibenzo[c,g]carbazole	267	20.279	20.279	0.0	1	100862	0	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	247175	624.2	
45 Dibenzo(def,p)chrysene	302	22.826	22.830	-0.004	1	106274	0	
46 Dibenzo[a,e]pyrene	302	23.757	23.757	0.0	1	114945	0	
47 1,2:7,8-Dibenzpyrene	302	24.134	24.135	-0.001	0	34656	0	M
S 48 Benzofluoranthene	1				0		1206.1	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8724.D

Injection Date: 20-Dec-2012 18:17:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 6

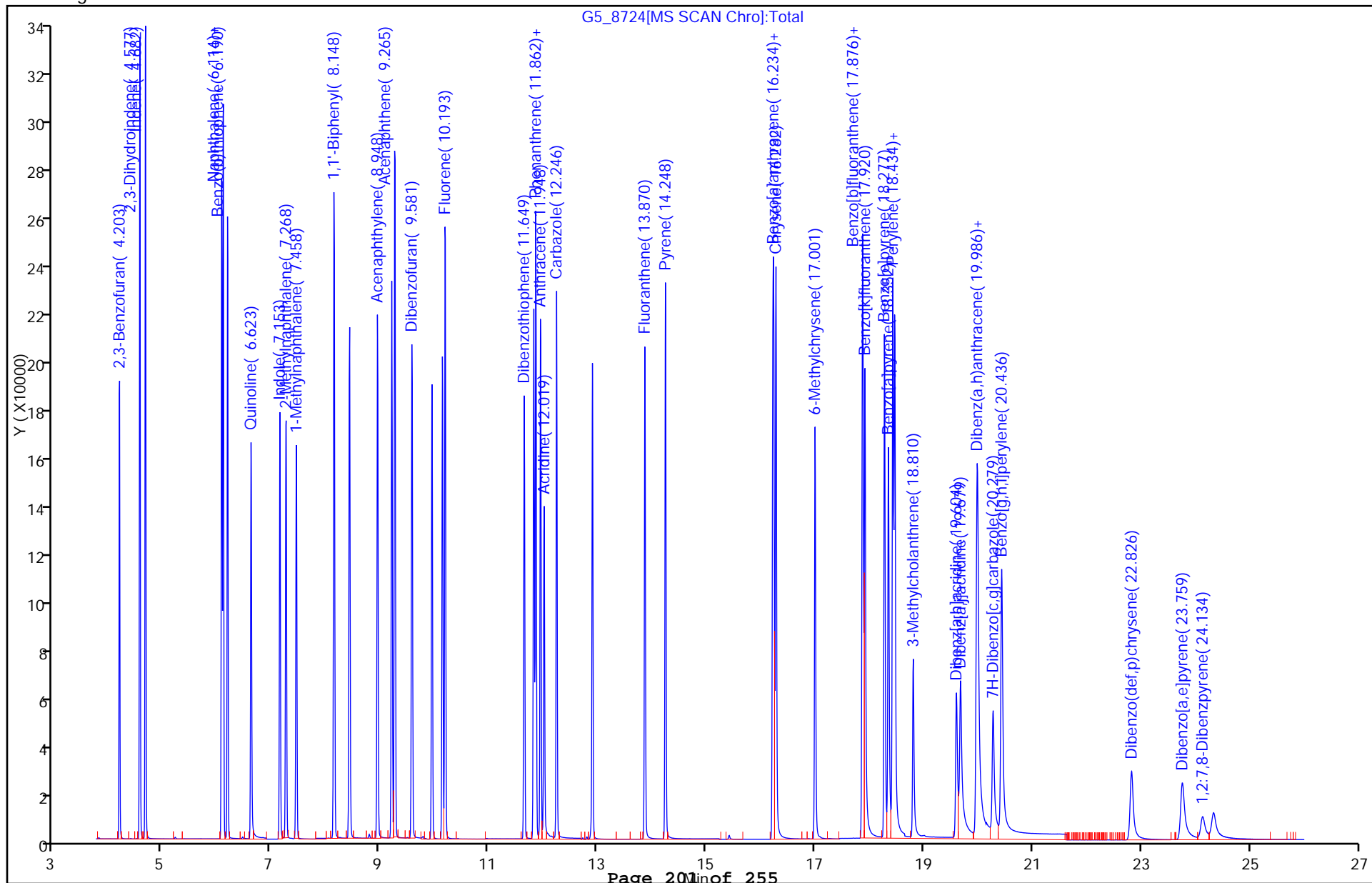
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



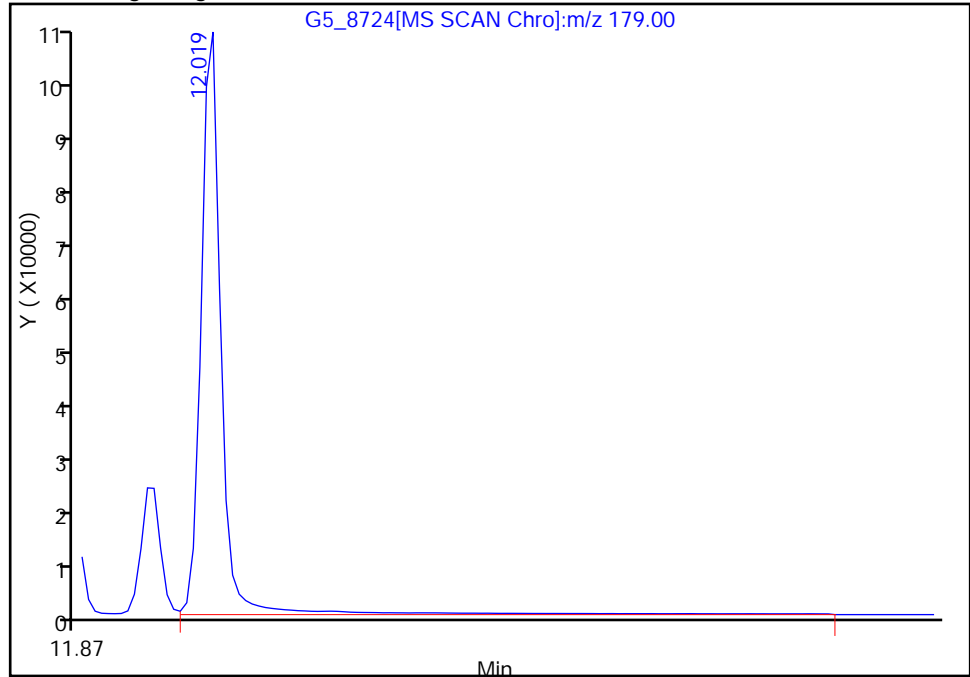
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8724.D		
Injection Date:	20-Dec-2012 18:17:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:		Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	6
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

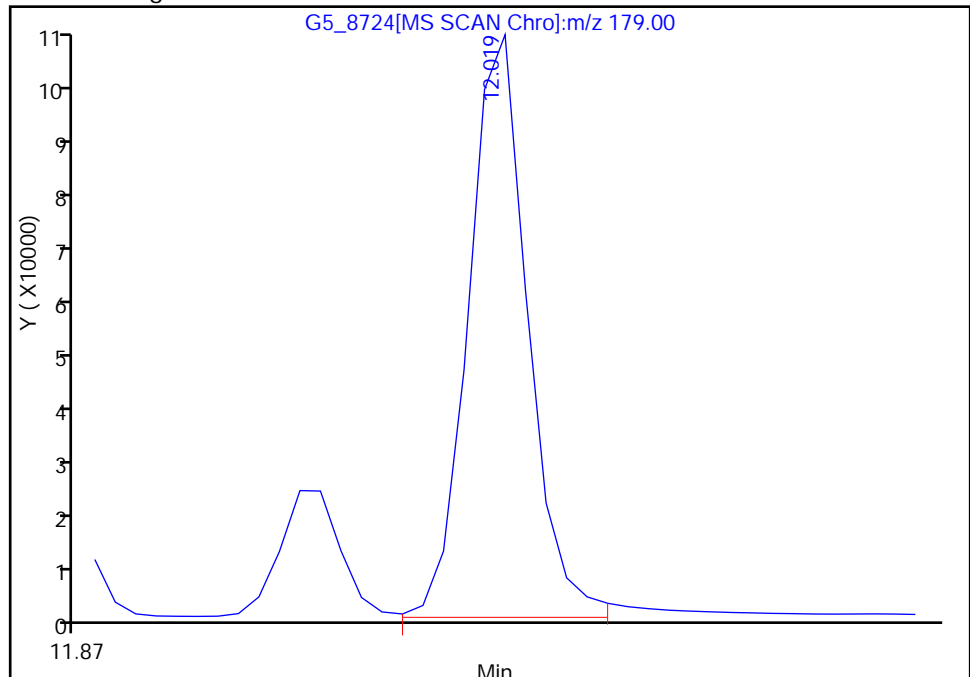
RT: 12.02
Response: 166697
Amount: 585.3950

Processing Integration Results



RT: 12.02
Response: 153894
Amount: 673.0811

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:54:52
Audit Action: Split an Integrated Peak
Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8725.D
 Lims ID: STD0800 Client ID:
 Inject. Date: 20-Dec-2012 18:52:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 6
 Sample ID: STD0800
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 6
 Lims Batch ID: 153241 Lims Sample ID: 7
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:51 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:55:28

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	171173	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	273160	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	341522	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	396581	800.3	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	200225	796.8	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	339493	747.3	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	193256	800.0	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	251151	802.8	
10 Indene	116	4.682	4.682	0.0	1	248858	807.6	
11 Naphthalene	128	6.114	6.114	0.0	1	410324	804.0	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	357180	792.9	
13 Quinoline	129	6.623	6.628	-0.005	4	231999	851.4	
14 Indole	117	7.153	7.157	-0.004	1	240136	851.1	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	272415	817.2	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	248983	816.7	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	320325	817.2	
18 Acenaphthylene	152	8.948	8.948	0.0	2	342231	863.4	
19 Acenaphthene	154	9.273	9.273	0.0	4	225066	815.0	
20 Dibenzofuran	168	9.581	9.590	-0.009	1	330359	825.0	
21 Fluorene	166	10.198	10.198	0.0	1	264675	835.5	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	309572	815.7	
23 Phenanthrene	178	11.862	11.862	0.0	1	366032	807.8	
24 Anthracene	178	11.948	11.947	0.001	1	329869	879.6	
25 Acridine	179	12.019	12.019	0.001	1	232994	942.5	M
26 Carbazole	167	12.246	12.246	0.0	1	317308	888.4	
27 Fluoranthene	202	13.870	13.870	0.0	1	342804	855.8	
28 Pyrene	202	14.248	14.248	0.0	6	387296	870.1	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	303585	843.7	
30 Chrysene	228	16.283	16.282	0.0	1	418206	804.1	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.002	17.001	0.001	1	280695	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.870	17.869	0.001	1	143031	917.3	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	386821	819.1	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	448470	790.3	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	384786	820.4	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	355126	828.1	
37 Perylene	252	18.472	18.465	0.007	1	418953	793.6	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	159938	964.4	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	147004	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	255637	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	356430	868.2	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	288713	925.7	
43 7H-Dibenzo[c,g]carbazole	267	20.273	20.279	-0.006	1	156984	0	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	361614	831.9	
45 Dibenzo(def,p)chrysene	302	22.824	22.830	-0.006	1	152319	0	
46 Dibenzo[a,e]pyrene	302	23.761	23.757	0.004	1	168614	0	
47 1,2:7,8-Dibenzpyrene	302	24.132	24.135	-0.003	0	60998	0	M
S 48 Benzofluoranthene	1				0		1609.5	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8725.D

Injection Date: 20-Dec-2012 18:52:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 7

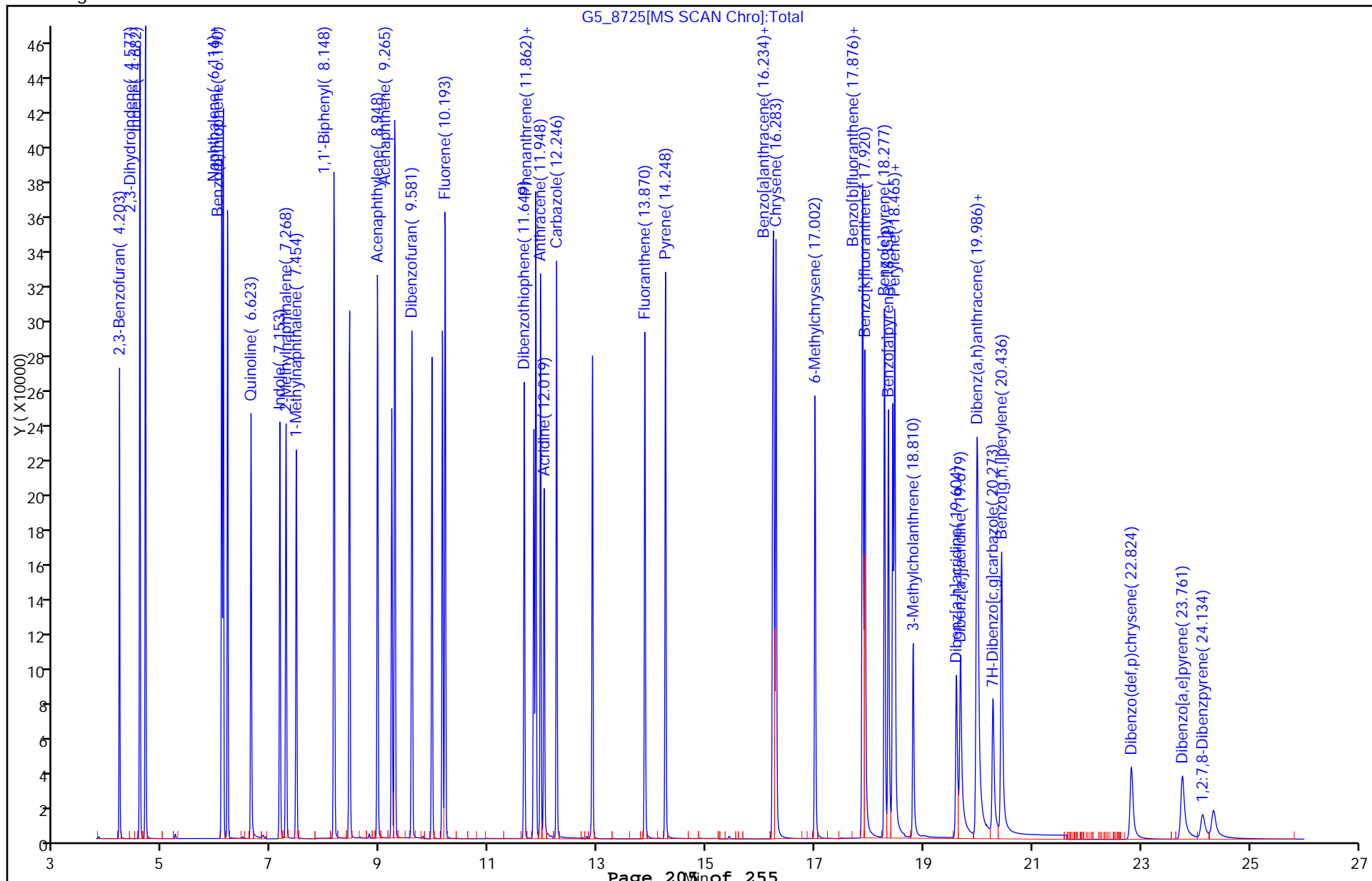
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8725.D

Injection Date: 20-Dec-2012 18:52:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 7

Operator ID: vasquezk

Injection Vol: 1.0 ul

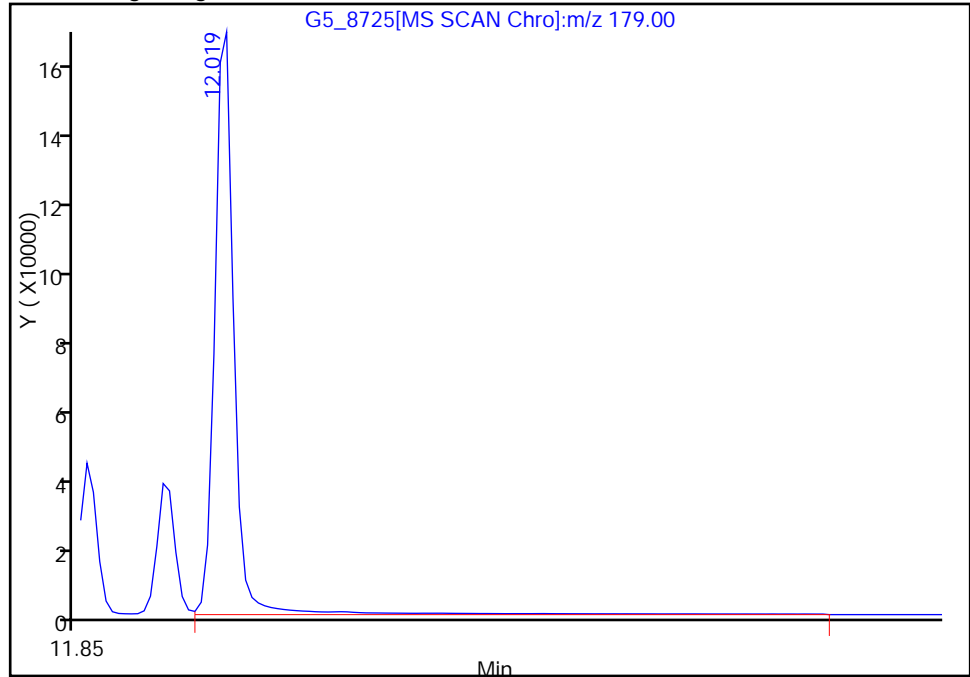
Column Type:

Column Dia:

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

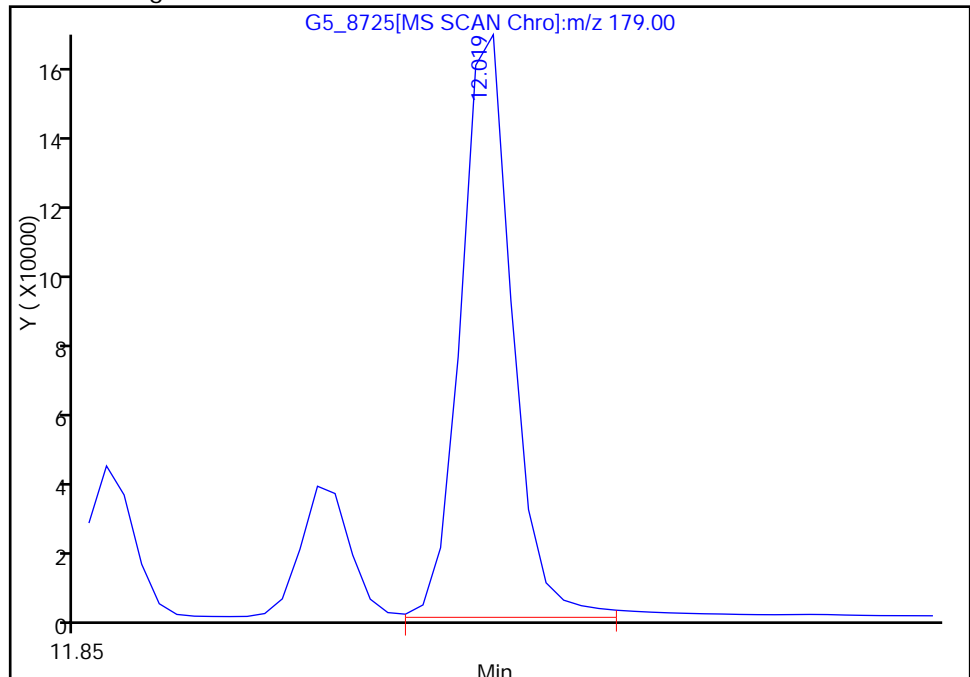
RT: 12.02
Response: 246453
Amount: 796.8613

Processing Integration Results



RT: 12.02
Response: 232994
Amount: 942.5320

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:55:28

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Lims ID: STD1200 Client ID:
 Inject. Date: 20-Dec-2012 19:28:30 Dil. Factor: 1.0000
 Sample Type: IC Calib Level: 7
 Sample ID: STD1200
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 7
 Lims Batch ID: 153241 Lims Sample ID: 8
 Sublist: chrom-SMSG5_8270CSLPSIM*sub1
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\SMSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:56:02

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	171188	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	264758	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	337170	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	609559	1230.0	
\$ 5 Fluorene-d10 (Surr)	176	10.149	10.144	0.005	0	300654	1234.5	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	510311	1137.8	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	295088	1221.5	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	385253	1231.4	
10 Indene	116	4.682	4.682	0.0	1	383271	1243.7	
11 Naphthalene	128	6.114	6.114	0.0	1	629456	1233.3	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	551649	1263.4	
13 Quinoline	129	6.622	6.628	-0.006	4	357799	1312.9	
14 Indole	117	7.156	7.157	-0.001	1	371070	1315.0	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	419399	1257.9	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	383888	1259.1	
17 1,1'-Biphenyl	154	8.147	8.147	0.0	1	490433	1251.0	
18 Acenaphthylene	152	8.948	8.948	0.0	2	521971	1316.8	
19 Acenaphthene	154	9.273	9.273	0.0	3	347096	1256.8	
20 Dibenzofuran	168	9.590	9.590	0.0	1	503046	1256.2	
21 Fluorene	166	10.198	10.198	0.0	1	402223	1309.9	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	463527	1260.1	
23 Phenanthrene	178	11.862	11.862	0.0	1	548658	1249.3	
24 Anthracene	178	11.947	11.947	0.0	1	500180	1376.1	
25 Acridine	179	12.018	12.019	0.0	1	358808	1497.6	M
26 Carbazole	167	12.246	12.246	0.0	1	481205	1390.1	
27 Fluoranthene	202	13.870	13.870	0.0	1	518175	1334.7	
28 Pyrene	202	14.248	14.248	0.0	6	578309	1340.5	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	464412	1307.4	
30 Chrysene	228	16.282	16.282	0.0	1	625622	1218.4	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
31 6-Methylchrysene	242	17.001	17.001	0.0	1	415214	0	
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	217927	1415.6	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	598649	1284.1	
34 Benzo[k]fluoranthene	252	17.919	17.920	-0.001	1	687069	1226.5	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	589930	1274.1	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	567621	1340.7	
37 Perylene	252	18.465	18.465	0.0	1	642839	1233.4	
38 3-Methylcholanthrene	268	18.810	18.810	0.0	1	254576	1554.9	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	239998	0	
40 Dibenzo[a,j]acridine	279	19.679	19.679	0.0	1	422762	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	563810	1391.0	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	457613	1486.1	
43 7H-Dibenzo[c,g]carbazole	267	20.273	20.279	-0.006	1	265019	0	
44 Benzo[g,h,i]perylene	276	20.435	20.436	-0.001	1	567472	1322.3	
45 Dibenzo(def,p)chrysene	302	22.824	22.830	-0.006	1	256605	0	
46 Dibenzo[a,e]pyrene	302	23.763	23.757	0.006	1	279131	0	
47 1,2:7,8-Dibenzpyrene	302	24.137	24.135	0.002	0	97778	0	M
S 48 Benzofluoranthene	1				0		2510.5	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D

Injection Date: 20-Dec-2012 19:28:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 8

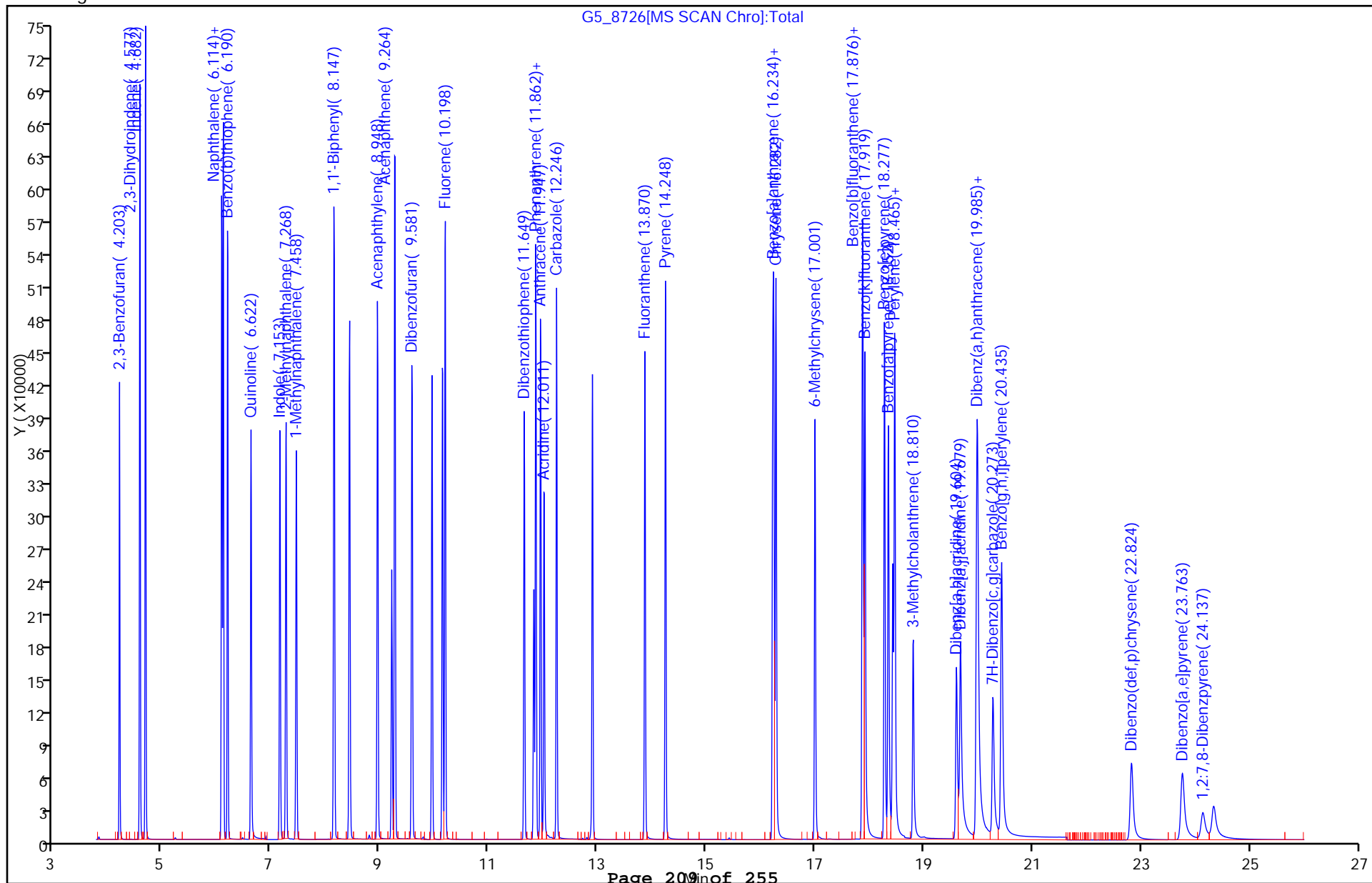
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D

Injection Date: 20-Dec-2012 19:28:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 8

Operator ID: vasquezk

Injection Vol: 1.0 ul

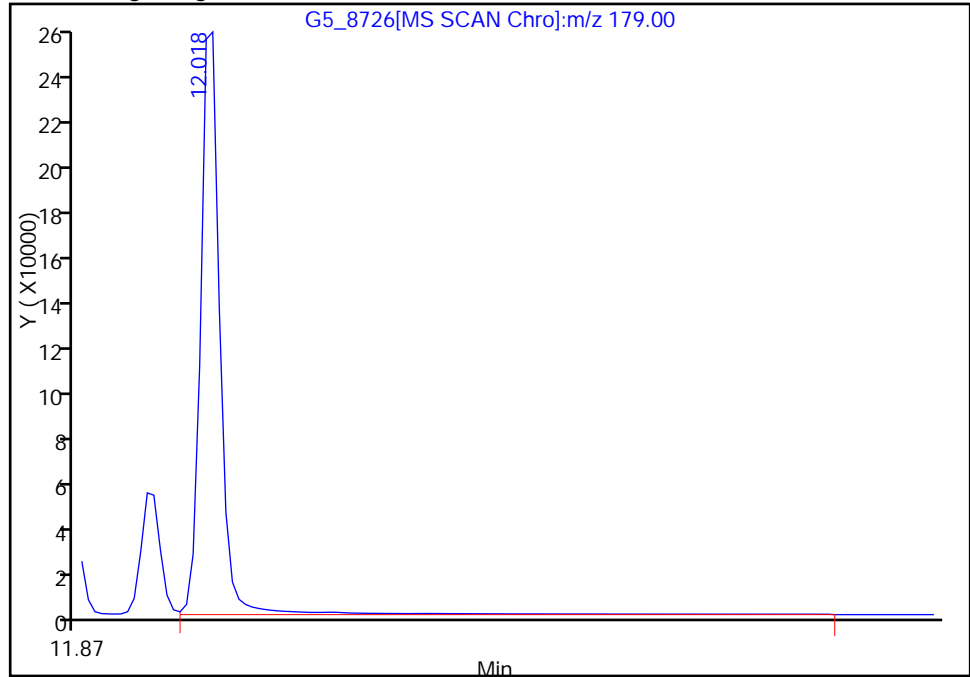
Column Type:

Column Dia:

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

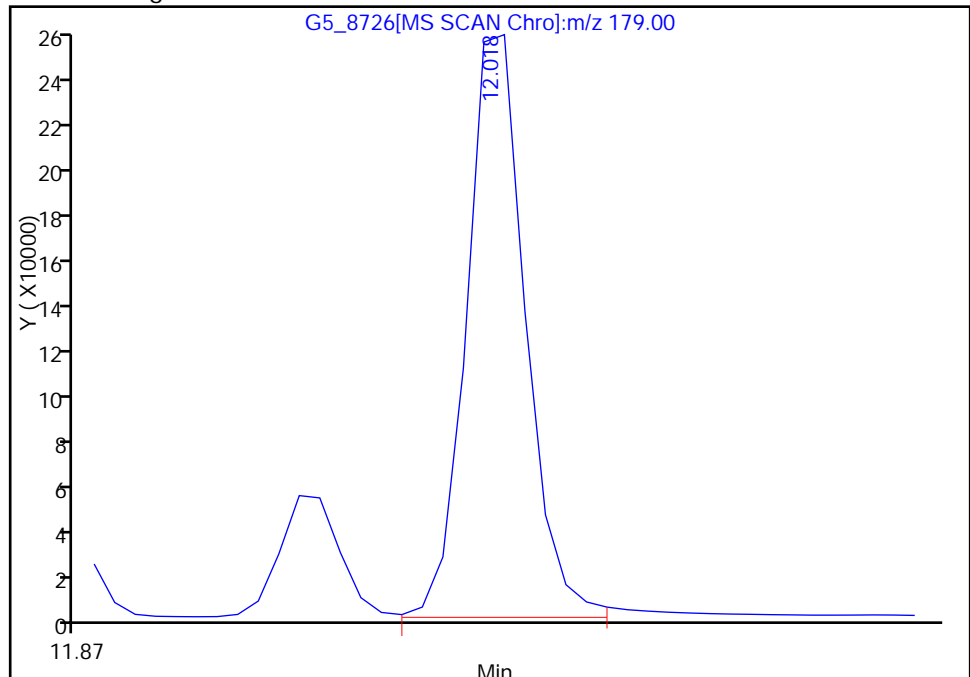
RT: 12.02
Response: 377850
Amount: 1255.8278

Processing Integration Results



RT: 12.02
Response: 358808
Amount: 1497.5505

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:56:02

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-36732-1
 SDG No.: _____
 Lab Sample ID: ICV 280-153241/9 Calibration Date: 12/20/2012 20:03
 Instrument ID: SMS_G5 Calib Start Date: 12/20/2012 15:49
 GC Column: Vf-5MS (30.25) ID: 0.25 (mm) Calib End Date: 12/20/2012 19:28
 Lab File ID: G5_8727.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indene	Ave	1.080	0.8958		498000	600000	-17.1	35.0
Naphthalene	Ave	1.789	1.780		597000	600000	-0.5	35.0
2-Methylnaphthalene	Ave	1.169	1.154		592000	600000	-1.3	35.0
1-Methylnaphthalene	Ave	1.069	1.133		636000	600000	6.0	35.0
Acenaphthylene	Ave	1.389	1.486		642000	600000	7.0	35.0
Acenaphthene	Ave	0.9680	0.9874		612000	600000	2.0	35.0
Dibenzofuran	Ave	1.404	1.430		611000	600000	1.9	35.0
Fluorene	Ave	0.6959	0.7034		607000	600000	1.1	35.0
Phenanthrene	Ave	0.995	1.015		612000	600000	1.9	35.0
Anthracene	Ave	0.8237	0.8916		649000	600000	8.2	35.0
Carbazole	Ave	0.7845	0.8464		647000	600000	7.9	35.0
Fluoranthene	Ave	0.8798	0.9473		646000	600000	7.7	35.0
Pyrene	Ave	0.9777	1.008		618000	600000	3.1	35.0
Benzo[a]anthracene	Ave	0.6321	0.8239		782000	600000	30.3	35.0
Chrysene	Ave	0.9137	0.9816		645000	600000	7.4	35.0
Benzo[b]fluoranthene	Ave	0.8296	0.7617		551000	600000	-8.2	35.0
Benzo[k]fluoranthene	Ave	0.997	1.031		620000	600000	3.4	35.0
Benzo[a]pyrene	Ave	0.7534	0.6290		501000	600000	-16.5	35.0
Indeno[1,2,3-cd]pyrene	Ave	0.7213	0.7622		634000	600000	5.7	35.0
Dibenz(a,h)anthracene	Ave	0.5480	0.6278		687000	600000	14.6	35.0
Benzo[g,h,i]perylene	Ave	0.7637	0.8096		636000	600000	6.0	35.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8727.D
 Lims ID: ICV Client ID:
 Inject. Date: 20-Dec-2012 20:03:30 Dil. Factor: 1.0000
 Sample Type: ICV
 Sample ID: ICV
 Misc. Info.: CSLP SIM =CSLP SIM
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 8
 Lims Batch ID: 153241 Lims Sample ID: 9
 Sublist:
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLP SIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 06:56:34

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	172456	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	277087	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	320681	600.0	
10 Indene	116	4.682	4.682	0.0	1	154479	497.6	
11 Naphthalene	128	6.114	6.114	0.0	1	306932	596.9	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	198940	592.3	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	195415	636.2	
18 Acenaphthylene	152	8.948	8.948	0.0	2	256318	641.9	
19 Acenaphthene	154	9.273	9.273	0.0	3	170288	612.0	
20 Dibenzofuran	168	9.581	9.590	-0.009	1	246652	611.4	
21 Fluorene	166	10.198	10.198	0.0	1	194909	606.5	
23 Phenanthrene	178	11.862	11.862	0.0	1	281120	611.6	
24 Anthracene	178	11.947	11.947	0.0	1	247044	649.4	M
26 Carbazole	167	12.246	12.246	0.0	1	234513	647.3	
27 Fluoranthene	202	13.870	13.870	0.0	1	262489	646.0	
28 Pyrene	202	14.248	14.248	0.0	6	279180	618.3	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	264207	782.0	
30 Chrysene	228	16.282	16.282	0.0	1	314787	644.6	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	244271	550.9	
34 Benzo[k]fluoranthene	252	17.919	17.920	-0.001	1	330465	620.2	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	201693	500.9	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	244409	634.0	
42 Dibenz(a,h)anthracene	278	19.998	19.992	0.006	1	201327	687.4	
44 Benzo[g,h,i]perylene	276	20.435	20.436	-0.001	1	259618	636.1	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8727.D

Injection Date: 20-Dec-2012 20:03:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 9

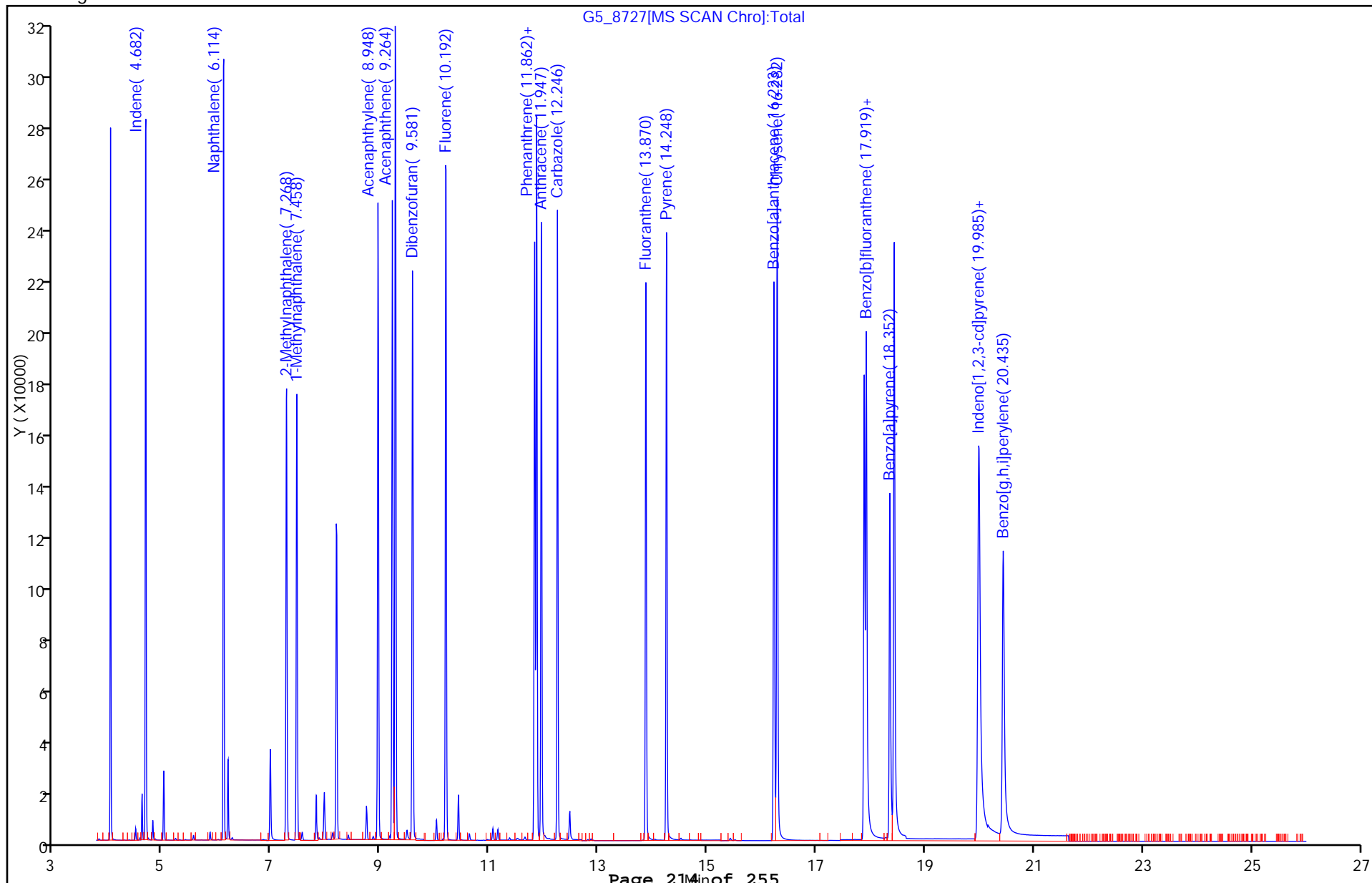
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



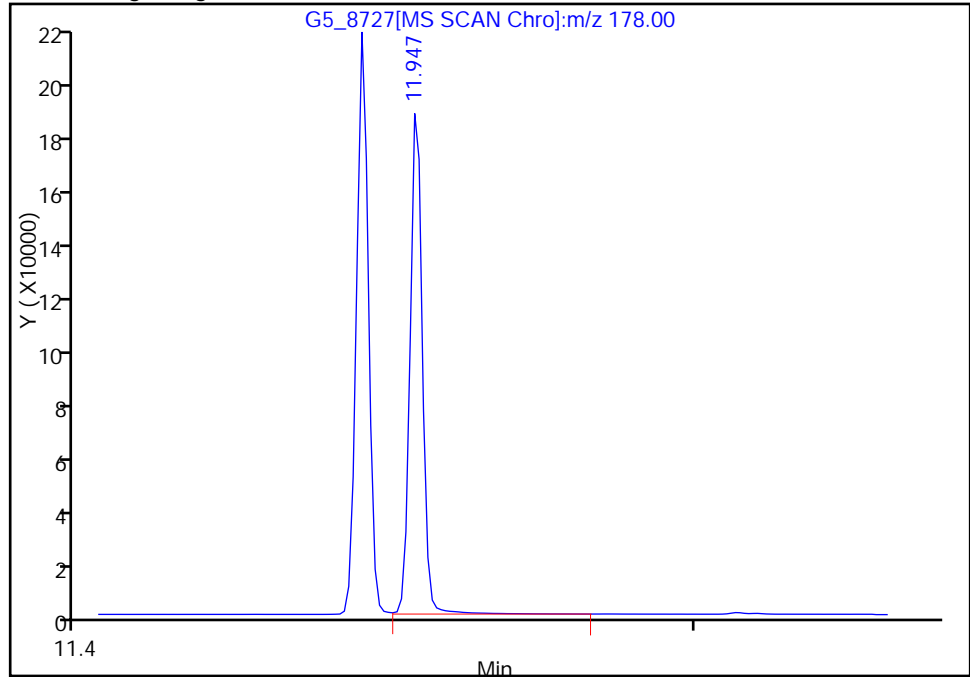
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8727.D		
Injection Date:	20-Dec-2012 20:03:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:		Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	9
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

24 Anthracene, Signal: 1, m/z: 178.0 Type: quant, RT: 11.95

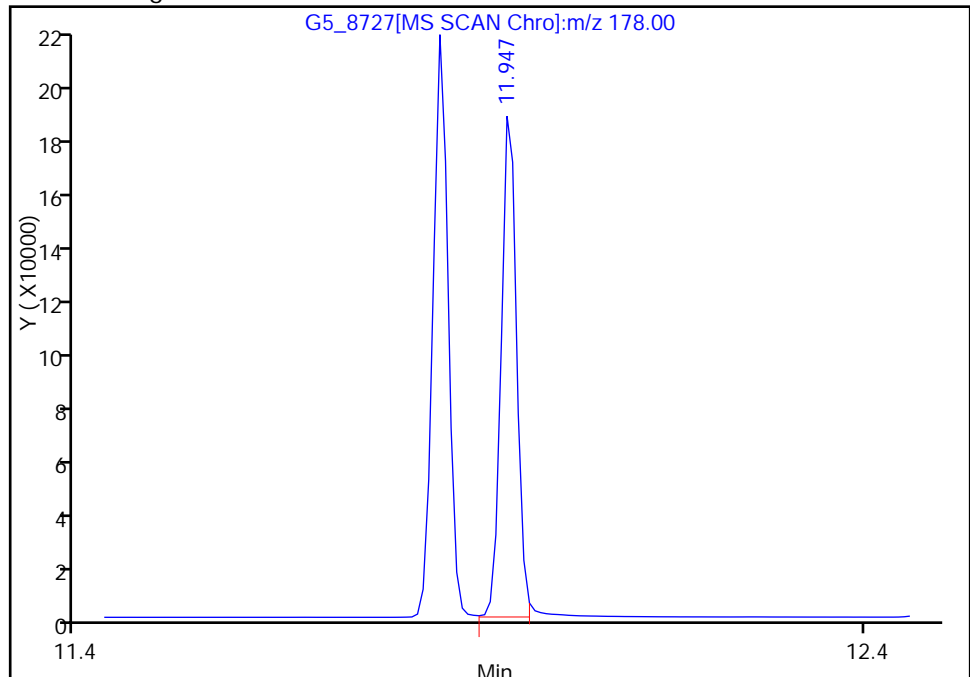
RT: 11.95
Response: 252273
Amount: 663.1630

Processing Integration Results



RT: 11.95
Response: 247044
Amount: 649.4172

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 06:56:34
Audit Action: Split an Integrated Peak
Audit Reason: Peak Tail

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-151568/1-A

Matrix: Water Lab File ID: G5_8728.D

Analysis Method: 8270C SIM Date Collected: _____

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 4000 (mL) Date Analyzed: 12/20/2012 20:39

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	ND		5.4	0.68
496-11-7	2,3-Dihydroindene	ND		5.0	0.70
90-12-0	1-Methylnaphthalene	ND		5.6	0.89
91-57-6	2-Methylnaphthalene	ND		5.9	0.98
83-32-9	Acenaphthene	ND		5.7	0.50
208-96-8	Acenaphthylene	ND		4.8	0.77
260-94-6	Acridine	ND		6.5	6.5
120-12-7	Anthracene	ND		4.2	0.80
56-55-3	Benzo[a]anthracene	3.43	J	4.3	0.92
50-32-8	Benzo[a]pyrene	ND		2.5	1.2
192-97-2	Benzo[e]pyrene	ND		4.3	1.1
205-99-2	Benzo[b]fluoranthene	5.62		4.7	1.4
95-15-8	Benzo(b) thiophene	ND		5.2	0.75
207-08-9	Benzo[k]fluoranthene	4.92		4.1	1.2
191-24-2	Benzo[g,h,i]perylene	3.90	J	6.2	1.2
86-74-8	Carbazole	ND		3.8	0.72
218-01-9	Chrysene	6.16		5.6	1.2
53-70-3	Dibenz(a,h)anthracene	4.05	J	5.9	1.0
132-64-9	Dibenzofuran	ND		5.7	0.99
132-65-0	Dibenzothiophene	ND		4.1	0.98
206-44-0	Fluoranthene	3.76	J	4.6	1.7
86-73-7	Fluorene	ND		4.1	0.85
95-13-6	Indene	ND		4.7	3.3
120-72-9	Indole	ND		4.7	1.7
193-39-5	Indeno[1,2,3-cd]pyrene	4.73	J	5.4	1.3
91-20-3	Naphthalene	ND		8.6	1.1
198-55-0	Perylene	ND		3.8	3.8
85-01-8	Phenanthrene	ND		6.3	3.2
129-00-0	Pyrene	2.32	J	4.2	0.99
91-22-5	Quinoline	ND		9.0	5.7
92-52-4	Biphenyl	ND		5.6	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 280-151568/1-A
Matrix: Water Lab File ID: G5_8728.D
Analysis Method: 8270C SIM Date Collected: _____
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 4000 (mL) Date Analyzed: 12/20/2012 20:39
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	67		23-84
1719-03-5	Chrysene-d12 (Surr)	80		28-101
1146-65-2	Naphthalene-d8 (Surr)	77		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D
 Lims ID: MB 280-151568/1-A Client ID:
 Inject. Date: 20-Dec-2012 20:39:30 Dil. Factor: 1.0000
 Sample Type: MB
 Sample ID: 280-0007476-010
 Misc. Info.: mb280-151568_1-a =MB280-151568_1-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 9
 Lims Batch ID: 153241 Lims Sample ID: 10
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:05:54

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	164016	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	258492	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	264516	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	109427	230.5	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	48125	202.4	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	84437	240.0	
11 Naphthalene	128	6.109	6.114	-0.006	1	1266	2.59	
23 Phenanthrene	178	11.862	11.862	0.0	1	3503	8.17	
27 Fluoranthene	202	13.873	13.870	0.003	1	5700	15.0	
28 Pyrene	202	14.252	14.248	0.004	6	3914	9.29	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	3822	13.7	
30 Chrysene	228	16.282	16.282	0.0	1	9924	24.6	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	8221	22.5	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	8653	19.7	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	521	1.43	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	1353	4.07	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	6014	18.9	
42 Dibenz(a,h)anthracene	278	19.992	19.992	0.0	1	3911	16.2	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	5256	15.6	
S 48 Benzo[fluoranthene	1				0		42.2	

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

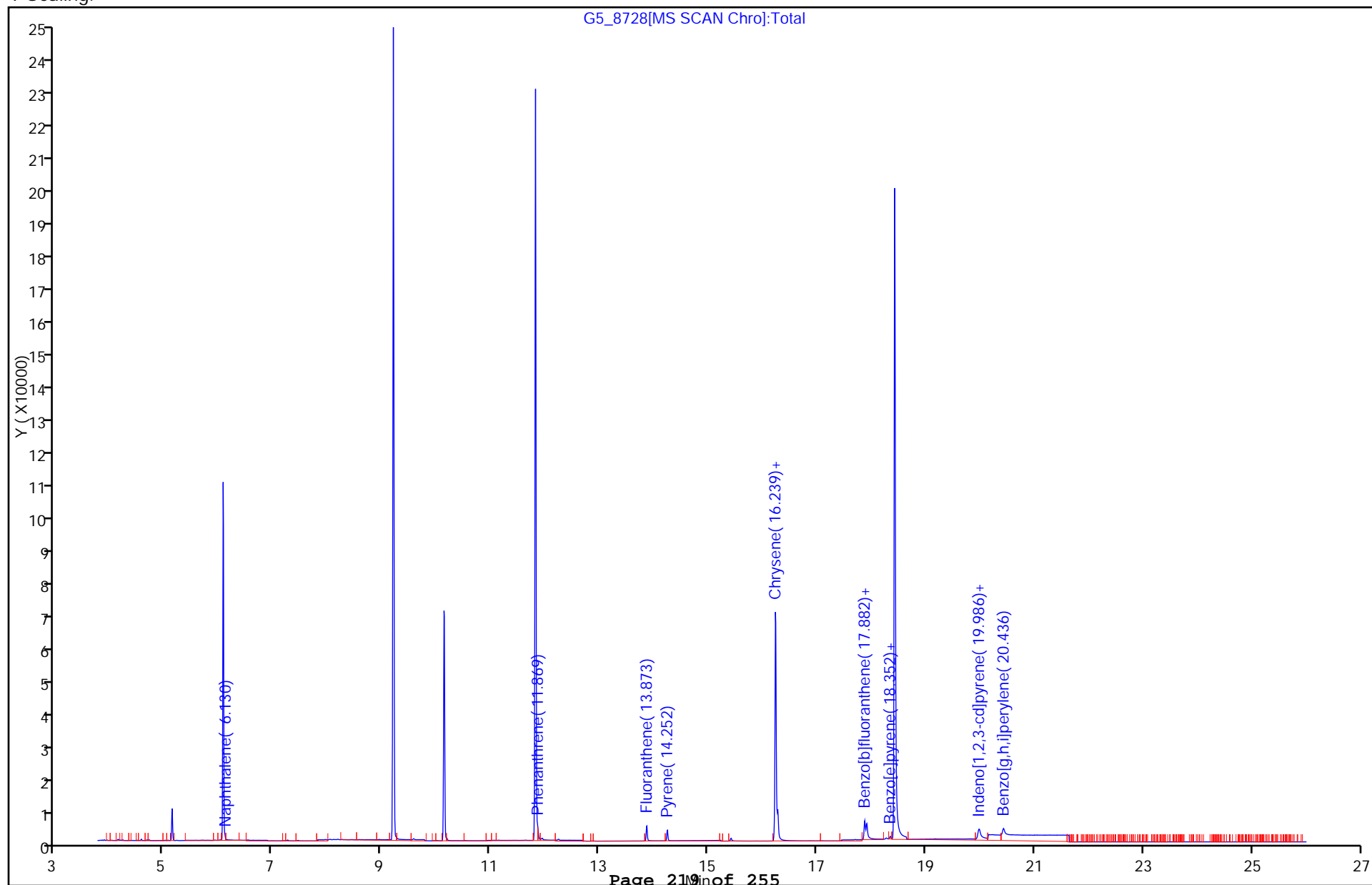
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

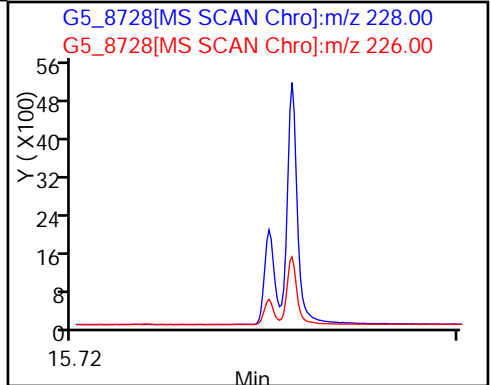
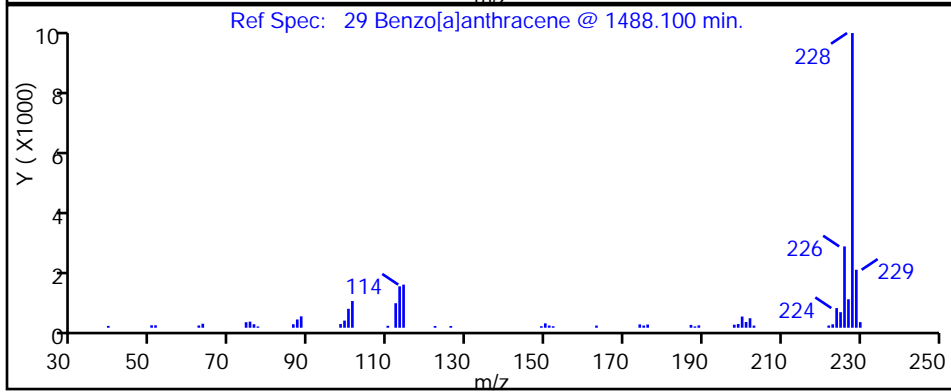
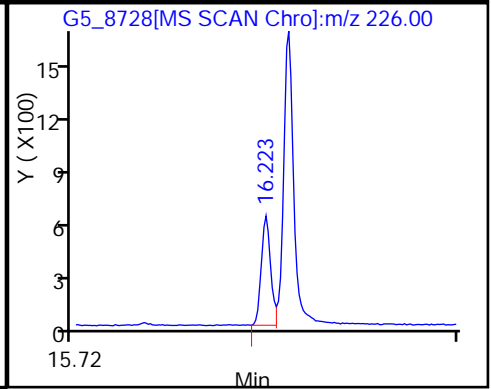
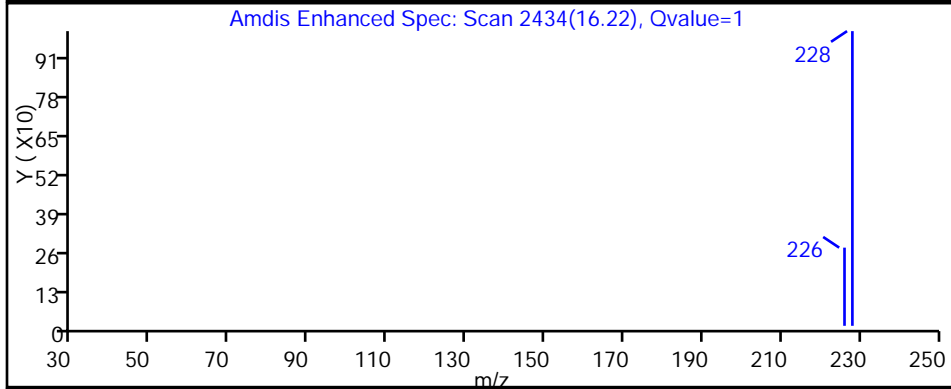
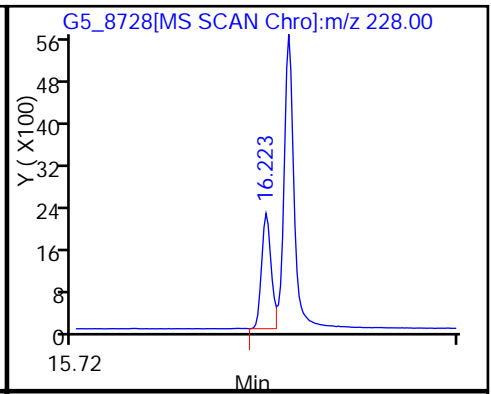
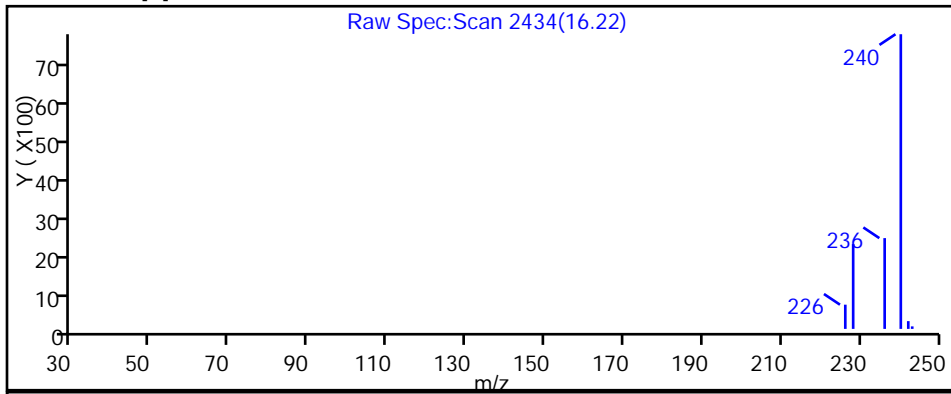
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

29 Benzo[a]anthracene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

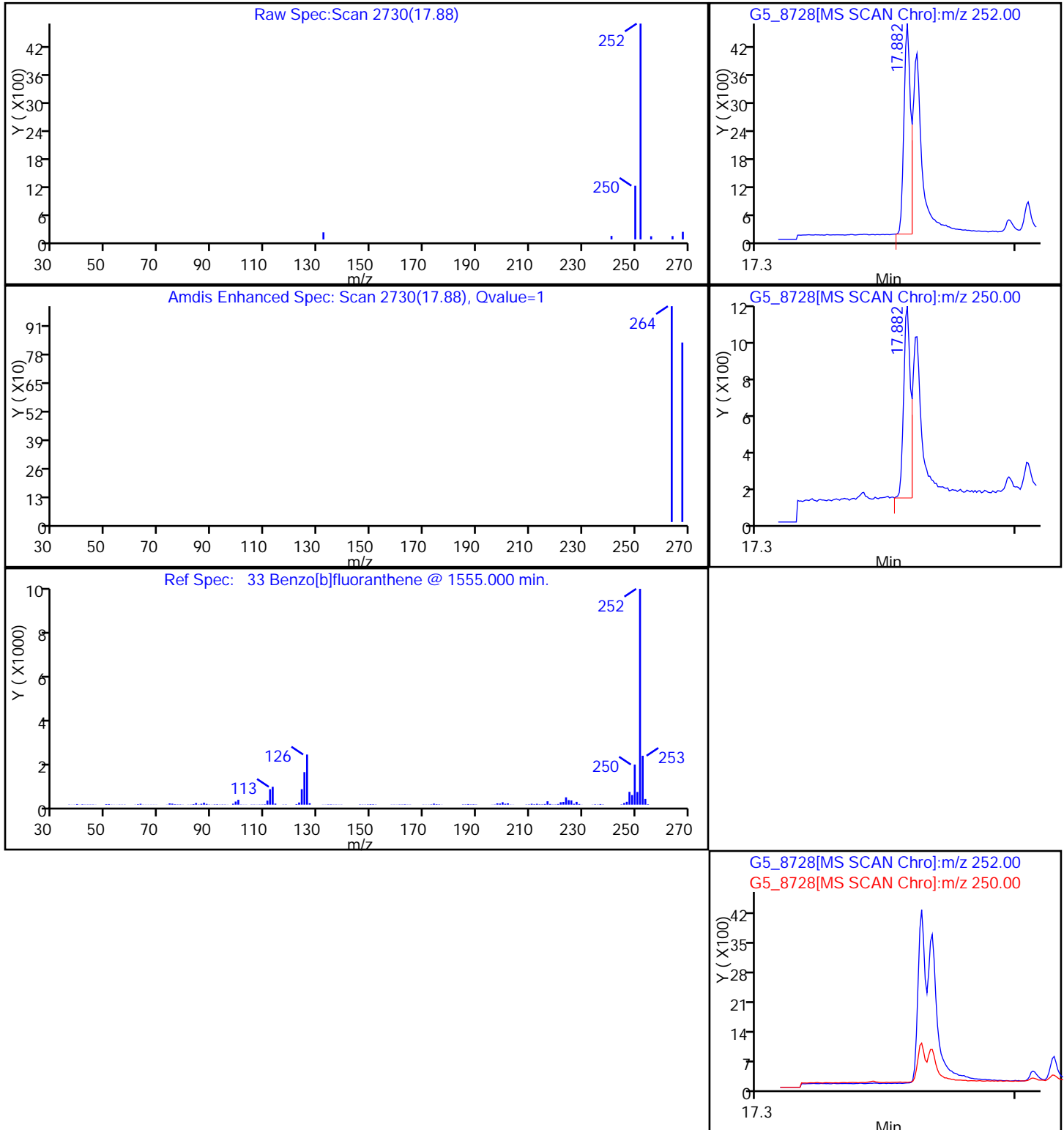
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

33 Benzo[b]fluoranthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

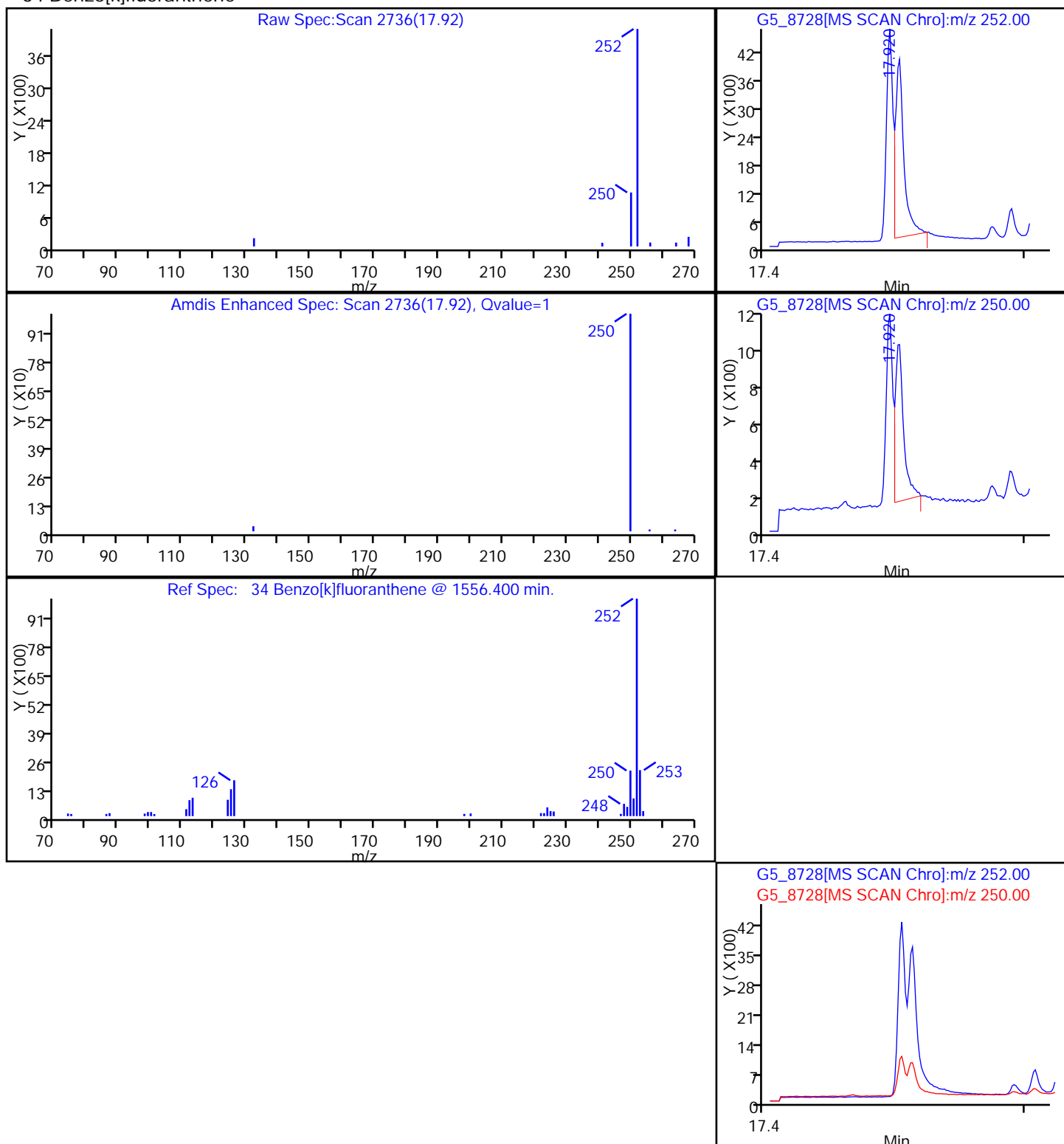
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

34 Benzo[k]fluoranthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

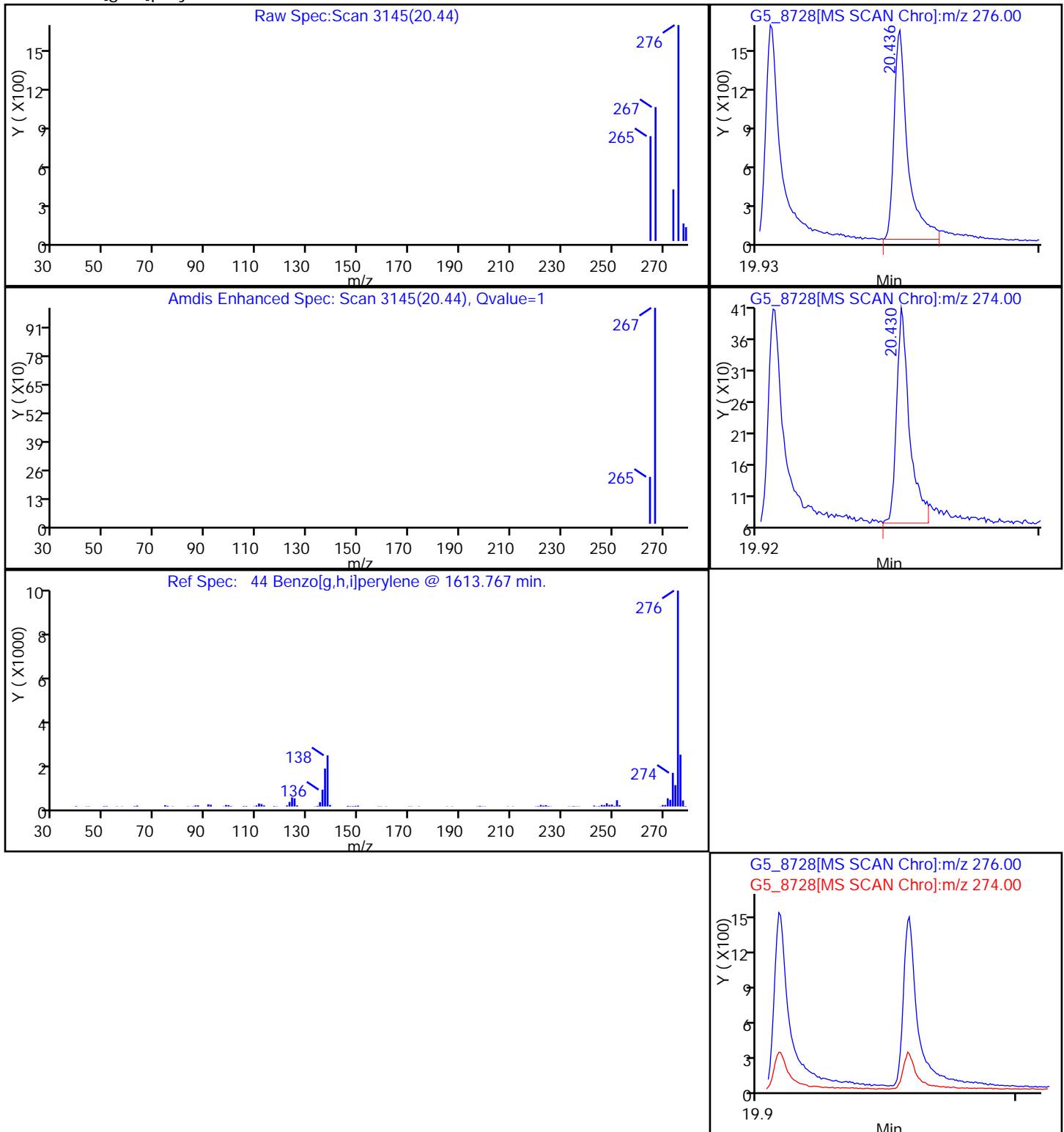
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

44 Benzo[g,h,i]perylene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

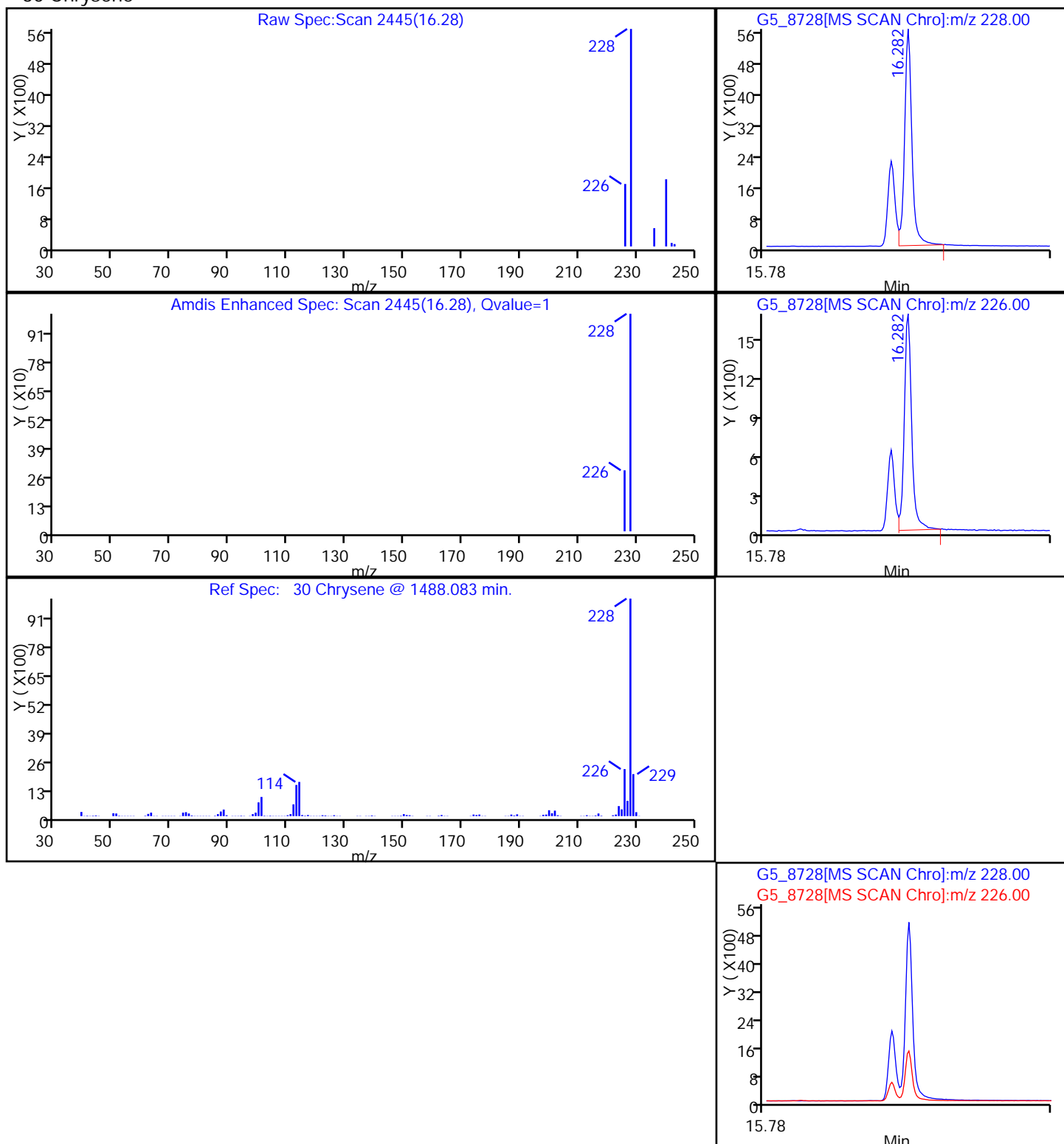
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

30 Chrysene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

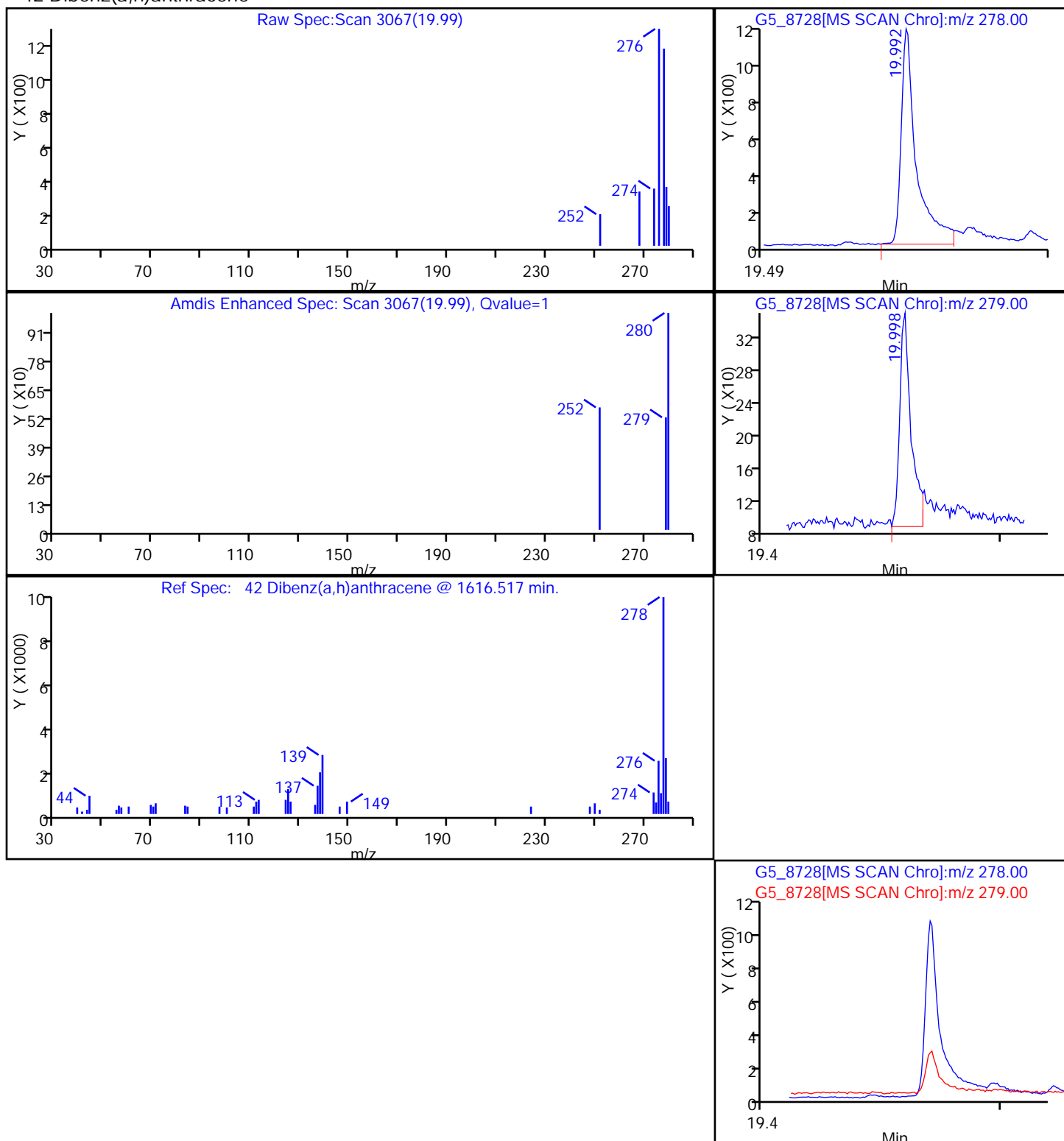
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

42 Dibenz(a,h)anthracene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

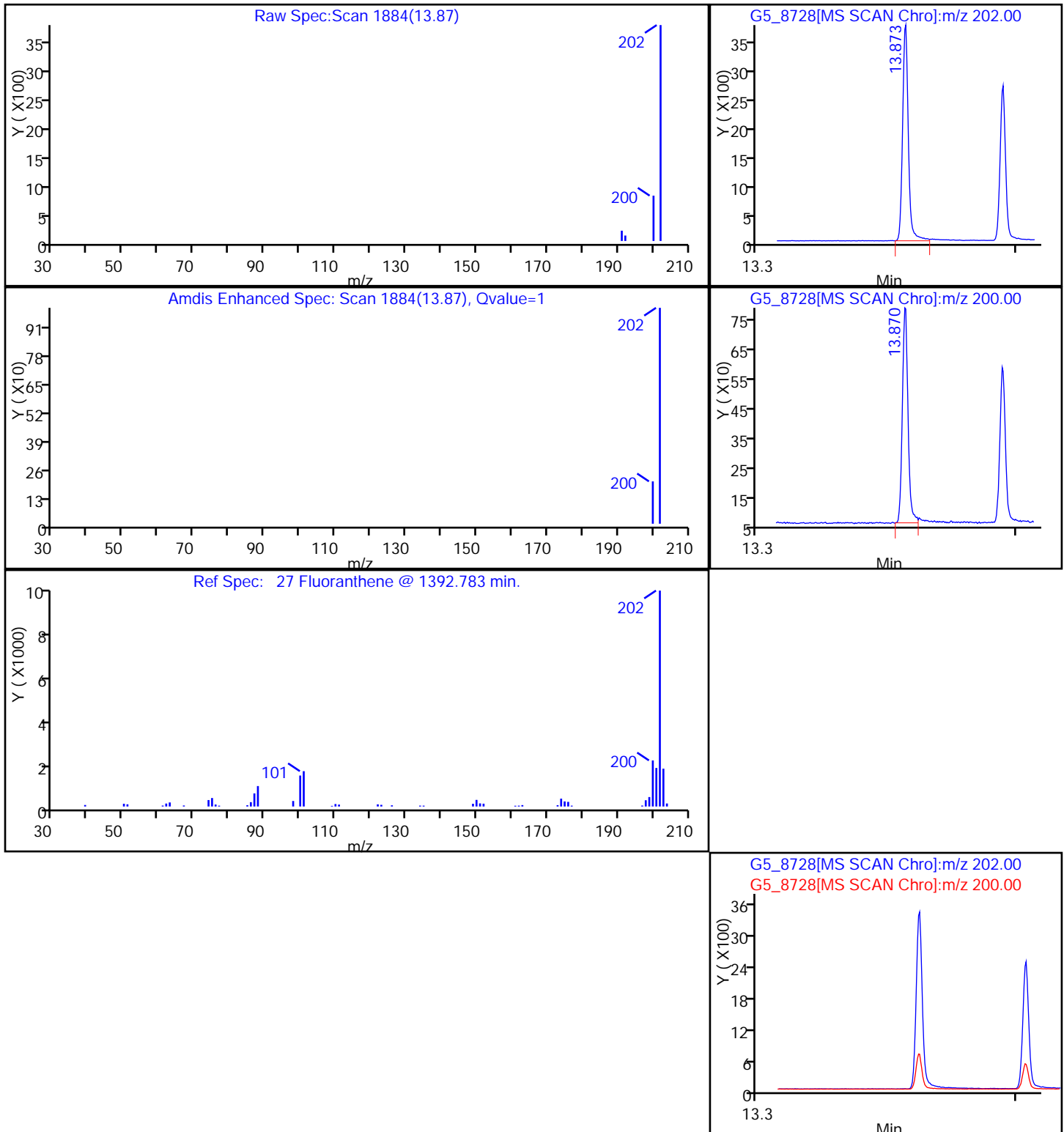
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

27 Fluoranthene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

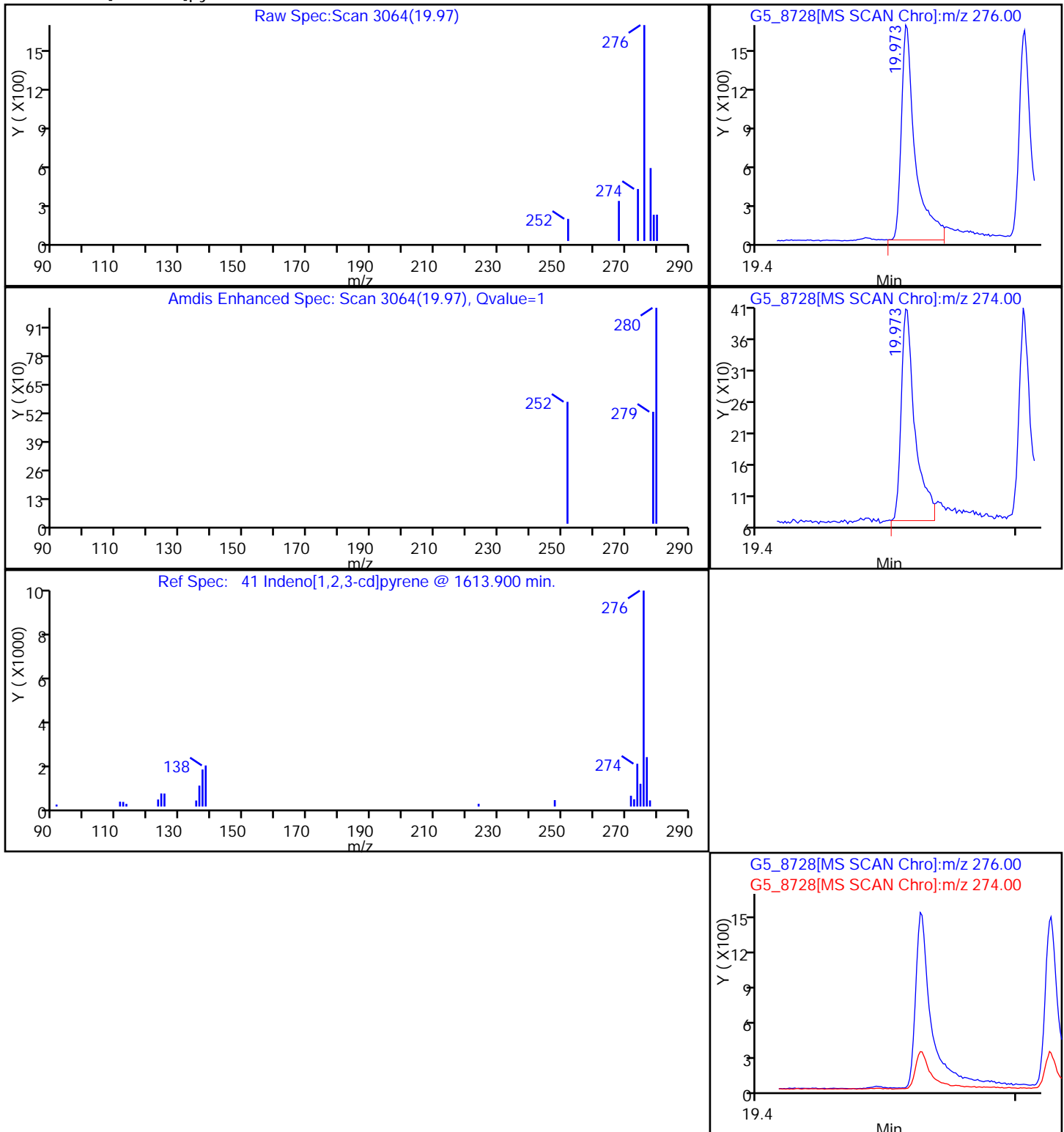
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

41 Indeno[1,2,3-cd]pyrene



TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8728.D

Injection Date: 20-Dec-2012 20:39:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID:

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 10

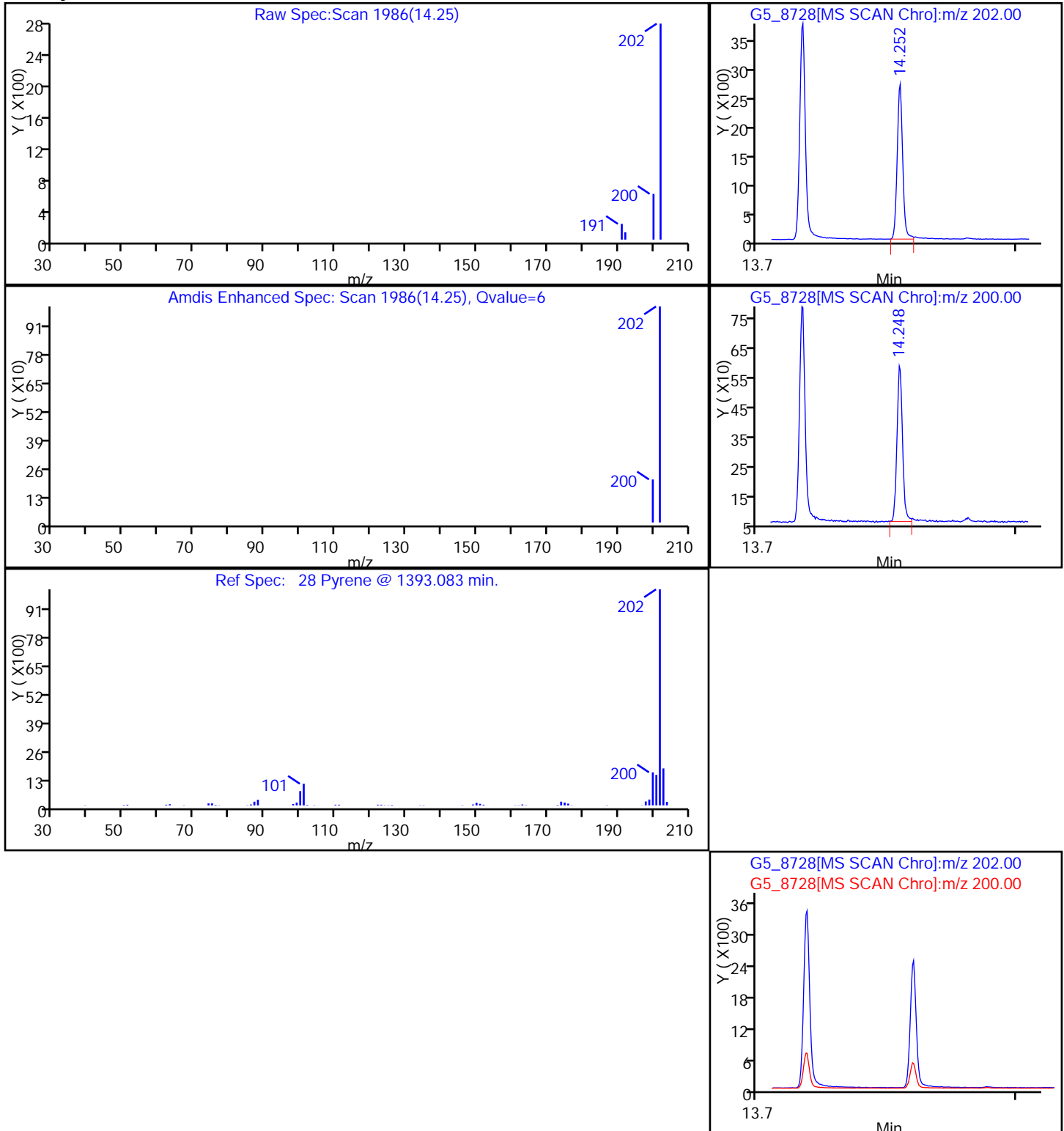
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

28 Pyrene



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-151568/2-A

Matrix: Water Lab File ID: G5_8729.D

Analysis Method: 8270C SIM Date Collected: _____

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 4000 (mL) Date Analyzed: 12/20/2012 21:14

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	46.4		5.4	0.68
496-11-7	2,3-Dihydroindene	44.4		5.0	0.70
90-12-0	1-Methylnaphthalene	45.9		5.6	0.89
91-57-6	2-Methylnaphthalene	45.6		5.9	0.98
83-32-9	Acenaphthene	45.8		5.7	0.50
208-96-8	Acenaphthylene	38.1		4.8	0.77
260-94-6	Acridine	35.8		6.5	6.5
120-12-7	Anthracene	42.6		4.2	0.80
56-55-3	Benzo[a]anthracene	46.3		4.3	0.92
50-32-8	Benzo[a]pyrene	37.1		2.5	1.2
192-97-2	Benzo[e]pyrene	50.2		4.3	1.1
205-99-2	Benzo[b]fluoranthene	45.6		4.7	1.4
95-15-8	Benzo(b) thiophene	45.9		5.2	0.75
207-08-9	Benzo[k]fluoranthene	47.9		4.1	1.2
191-24-2	Benzo[g,h,i]perylene	38.1		6.2	1.2
86-74-8	Carbazole	44.0		3.8	0.72
218-01-9	Chrysene	53.1		5.6	1.2
53-70-3	Dibenz(a,h)anthracene	44.1		5.9	1.0
132-64-9	Dibenzofuran	47.2		5.7	0.99
132-65-0	Dibenzothiophene	47.5		4.1	0.98
206-44-0	Fluoranthene	47.6		4.6	1.7
86-73-7	Fluorene	45.0		4.1	0.85
95-13-6	Indene	44.6		4.7	3.3
120-72-9	Indole	32.6		4.7	1.7
193-39-5	Indeno[1,2,3-cd]pyrene	42.2		5.4	1.3
91-20-3	Naphthalene	47.4		8.6	1.1
198-55-0	Perylene	22.8		3.8	3.8
85-01-8	Phenanthrene	49.3		6.3	3.2
129-00-0	Pyrene	47.1		4.2	0.99
91-22-5	Quinoline	40.9		9.0	5.7
92-52-4	Biphenyl	46.6		5.6	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 280-151568/2-A
Matrix: Water Lab File ID: G5_8729.D
Analysis Method: 8270C SIM Date Collected: _____
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 4000 (mL) Date Analyzed: 12/20/2012 21:14
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	57		23-84
1719-03-5	Chrysene-d12 (Surr)	69		28-101
1146-65-2	Naphthalene-d8 (Surr)	63		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8729.D
 Lims ID: LCS 280-151568/2-A Client ID:
 Inject. Date: 20-Dec-2012 21:14:30 Dil. Factor: 1.0000
 Sample Type: LCS
 Sample ID: 280-0007476-011
 Misc. Info.: lcs280-151568_2-a =LCS280-151568_2-A
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 10
 Lims Batch ID: 153241 Lims Sample ID: 11
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:06:13

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	165124	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	264087	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	301013	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	90764	189.9	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	41314	170.1	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	82761	206.7	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	43259	185.6	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	53639	177.7	
10 Indene	116	4.682	4.682	0.0	1	52976	178.2	
11 Naphthalene	128	6.114	6.114	0.0	1	93364	189.6	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	79905	183.5	
13 Quinoline	129	6.628	6.628	0.0	5	43037	163.7	
14 Indole	117	7.153	7.157	-0.004	1	35467	130.3	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	58673	182.4	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	54028	183.7	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	70419	186.2	
18 Acenaphthylene	152	8.948	8.948	0.0	2	58343	152.6	
19 Acenaphthene	154	9.265	9.273	-0.008	5	48853	183.4	
20 Dibenzofuran	168	9.590	9.590	0.0	1	72963	188.9	
21 Fluorene	166	10.198	10.198	0.0	1	55189	180.2	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	69661	189.9	
23 Phenanthrene	178	11.862	11.862	0.0	1	86469	197.4	
24 Anthracene	178	11.948	11.947	0.001	1	61738	170.3	
25 Acridine	179	12.019	12.019	0.001	1	34237	143.3	
26 Carbazole	167	12.246	12.246	0.0	1	60743	175.9	
27 Fluoranthene	202	13.870	13.870	0.0	1	73657	190.2	
28 Pyrene	202	14.248	14.248	0.0	6	81071	188.4	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	58740	185.2	
30 Chrysene	228	16.282	16.282	0.0	1	97285	212.2	
31 6-Methylchrysene	242	17.001	17.001	0.0	1	51679	0	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	7672	55.8	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	75866	182.3	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	95813	191.6	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	82948	200.7	
36 Benzo[a]pyrene	252	18.352	18.352	0.0	1	56115	148.5	
37 Perylene	252	18.465	18.465	0.0	1	42418	91.2	
38 3-Methylcholanthrene	268	18.804	18.810	-0.006	1	12555	85.9	
39 Dibenzo[a,h]acridine	279	19.604	19.604	0.0	1	24086	0	
40 Dibenzo[a,j]acridine	279	19.673	19.679	-0.006	1	37807	0	
41 Indeno[1,2,3-cd]pyrene	276	19.979	19.979	0.0	1	61129	168.9	
42 Dibenzo(a,h)anthracene	278	19.992	19.992	0.0	1	48516	176.5	
43 7H-Dibenzo[c,g]carbazole	267	20.279	20.279	0.0	1	16675	0	
44 Benzo[g,h,i]perylene	276	20.436	20.436	0.0	1	58383	152.4	
45 Dibenzo(def,p)chrysene	302	22.818	22.830	-0.012	1	9885	0	
46 Dibenzo[a,e]pyrene	302	23.759	23.757	0.002	1	17738	0	

Chrom Revision: 2.0 05-Dec-2012 19:13:16

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8729.D

Limit Group: MSSF - 8270 SIM_LL CSLP 4 liter water

Instrument ID: SMS_G5

Lims Sample ID: 11

Injection Vol: 1.0 ul

Column Dia:

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP10T-120612 MS Lab Sample ID: 280-36732-1 MS

Matrix: Water Lab File ID: G5_8733.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3741.8 (mL) Date Analyzed: 12/20/2012 23:37

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	63.4		5.8	0.73
496-11-7	2,3-Dihydroindene	60.6		5.3	0.75
90-12-0	1-Methylnaphthalene	65.4		6.0	0.95
91-57-6	2-Methylnaphthalene	64.7		6.3	1.0
83-32-9	Acenaphthene	66.8		6.1	0.53
208-96-8	Acenaphthylene	59.7		5.1	0.82
260-94-6	Acridine	11.6		6.9	6.9
120-12-7	Anthracene	59.7		4.5	0.86
56-55-3	Benzo[a]anthracene	10.2		4.6	0.98
50-32-8	Benzo[a]pyrene	2.49	J	2.7	1.3
192-97-2	Benzo[e]pyrene	3.39	J	4.6	1.2
205-99-2	Benzo[b]fluoranthene	4.63	J	5.0	1.5
95-15-8	Benzo(b) thiophene	63.2		5.6	0.80
207-08-9	Benzo[k]fluoranthene	4.24	J	4.4	1.3
191-24-2	Benzo[g,h,i]perylene	2.84	J	6.6	1.3
86-74-8	Carbazole	62.0		4.1	0.77
218-01-9	Chrysene	13.6		6.0	1.3
53-70-3	Dibenz(a,h)anthracene	2.30	J	6.3	1.1
132-64-9	Dibenzofuran	68.3		6.1	1.1
132-65-0	Dibenzothiophene	68.1		4.4	1.0
206-44-0	Fluoranthene	43.7		4.9	1.8
86-73-7	Fluorene	66.4		4.4	0.91
95-13-6	Indene	61.3		5.0	3.5
120-72-9	Indole	53.6		5.0	1.8
193-39-5	Indeno[1,2,3-cd]pyrene	2.53	J	5.8	1.3
91-20-3	Naphthalene	66.8		9.2	1.2
198-55-0	Perylene	ND		4.1	4.1
85-01-8	Phenanthrene	68.6		6.7	3.4
129-00-0	Pyrene	42.5		4.5	1.1
91-22-5	Quinoline	38.9		9.6	6.0
92-52-4	Biphenyl	66.7		6.0	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP10T-120612 MS Lab Sample ID: 280-36732-1 MS
Matrix: Water Lab File ID: G5_8733.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3741.8 (mL) Date Analyzed: 12/20/2012 23:37
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	80		23-84
1719-03-5	Chrysene-d12 (Surr)	18	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	82		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8733.D
 Lims ID: 280-36732-M-1-A MS Client ID: SLP10TMS-120612
 Inject. Date: 20-Dec-2012 23:37:30 Dil. Factor: 1.0000
 Sample Type: MS
 Sample ID: 280-0007476-015
 Misc. Info.: 280-36732-m-1-ams =280-36732-M-1-AMS
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 14
 Lims Batch ID: 153241 Lims Sample ID: 15
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:10:25

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	164780	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	264346	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	266357	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.082	6.081	0.001	1	117211	245.7	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	58120	239.0	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	18925	53.4	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	55180	237.3	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	68261	226.7	
10 Indene	116	4.682	4.682	0.0	1	68034	229.4	
11 Naphthalene	128	6.109	6.114	-0.005	1	122839	250.0	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	103171	236.7	
13 Quinoline	129	6.628	6.628	0.0	5	38147	145.4	
14 Indole	117	7.153	7.157	-0.004	1	54497	200.6	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	77690	242.1	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	71783	244.6	
17 1,1'-Biphenyl	154	8.148	8.147	0.001	1	94135	249.5	
18 Acenaphthylene	152	8.948	8.948	0.0	2	85225	223.4	
19 Acenaphthene	154	9.265	9.273	-0.008	4	66470	250.0	
20 Dibenzofuran	168	9.590	9.590	0.0	1	98533	255.6	
21 Fluorene	166	10.193	10.198	-0.005	1	76161	248.4	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	93636	254.9	
23 Phenanthrene	178	11.862	11.862	0.0	1	112512	256.6	
24 Anthracene	178	11.948	11.947	0.001	1	81065	223.4	
25 Acridine	179	12.019	12.019	0.001	1	10366	43.3	M
26 Carbazole	167	12.246	12.246	0.0	1	80191	232.0	
27 Fluoranthene	202	13.870	13.870	0.0	1	63348	163.4	
28 Pyrene	202	14.248	14.248	0.0	6	68540	159.1	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	10669	38.0	
30 Chrysene	228	16.282	16.282	0.0	1	20656	50.9	
31 6-Methylchrysene	242	17.001	17.001	0.0	1	5518	0	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	8784	72.2	
33 Benzo[b]fluoranthene	252	17.876	17.882	-0.006	1	6374	17.3	
34 Benzo[k]fluoranthene	252	17.920	17.920	0.0	1	7026	15.9	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	4634	12.7	
36 Benzo[a]pyrene	252	18.346	18.352	-0.006	1	3111	9.30	
37 Perylene	252	18.459	18.465	-0.006	1	649	1.58	
39 Dibenz[a,h]acridine	279	19.598	19.604	-0.006	1	954	0	
40 Dibenz[a,j]acridine	279	19.673	19.679	-0.006	1	482	0	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	3026	9.45	
42 Dibenz(a,h)anthracene	278	19.992	19.992	0.0	1	2091	8.60	
44 Benzo[g,h,i]perylene	276	20.430	20.436	-0.006	1	3609	10.6	
S 48 Benzofluoranthene	1				0		33.2	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8733.D

Injection Date: 20-Dec-2012 23:37:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TMS-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 15

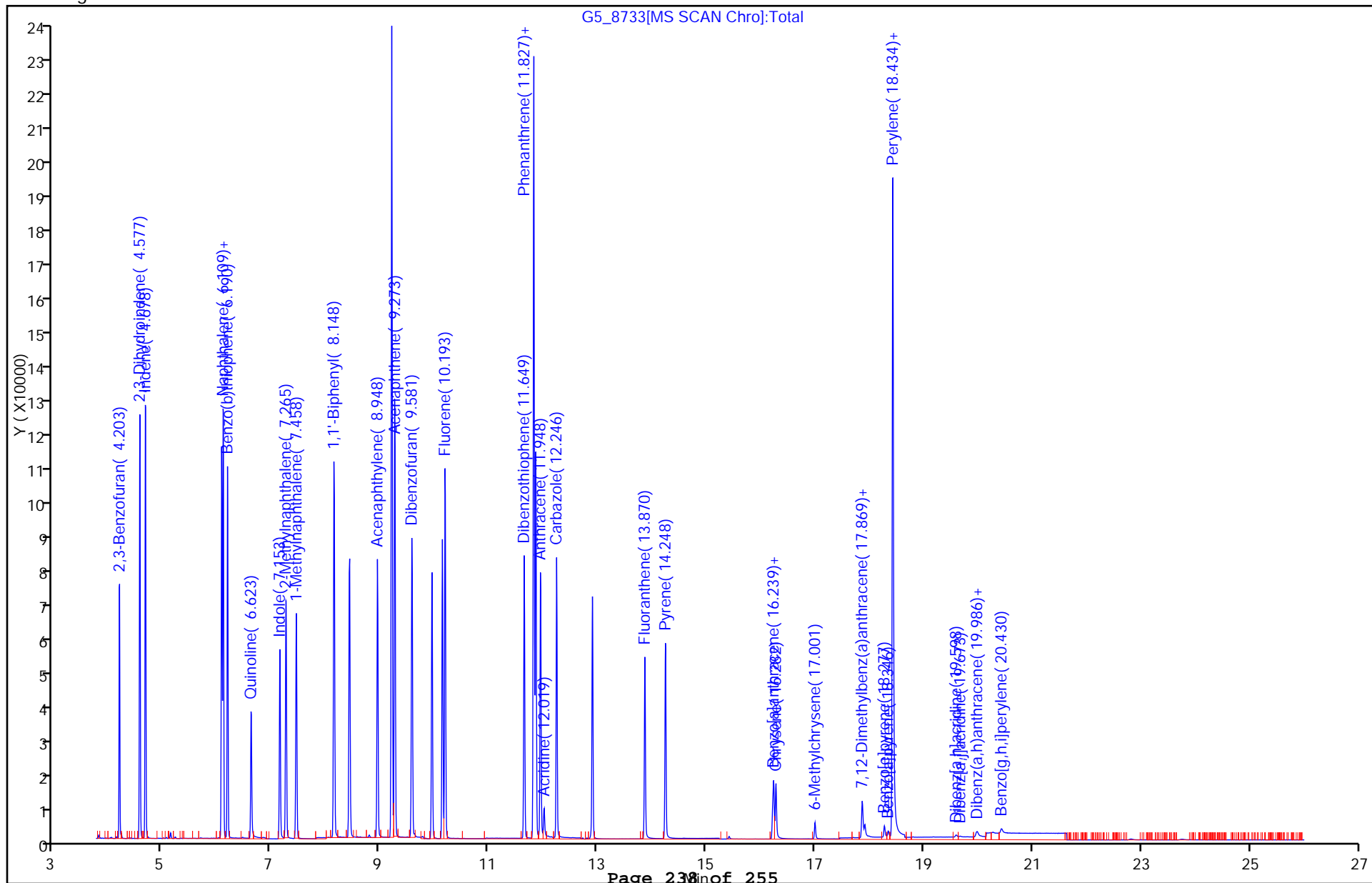
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



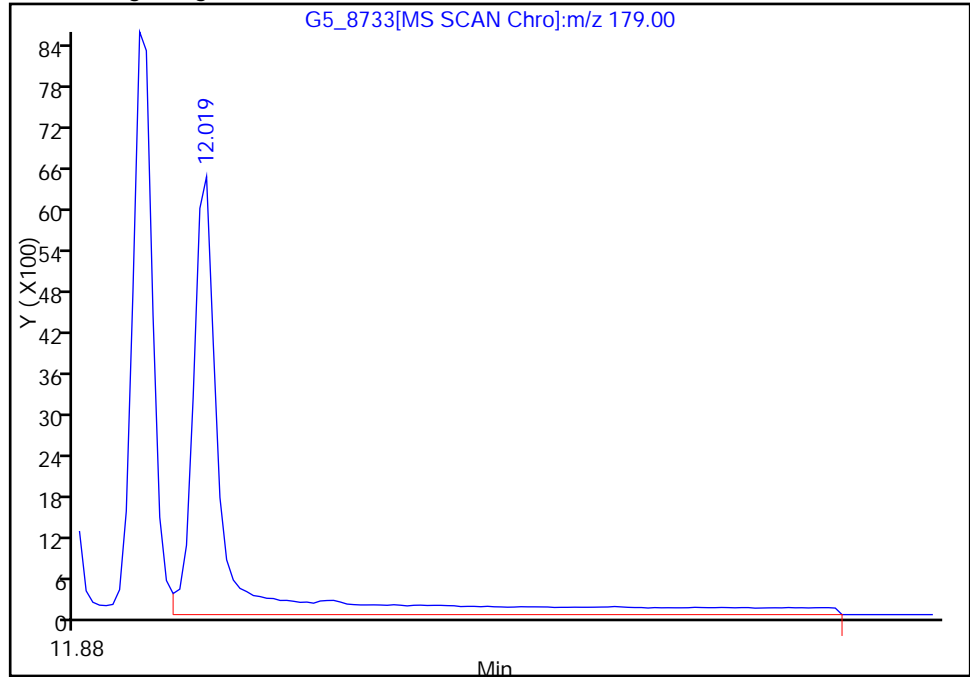
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8733.D		
Injection Date:	20-Dec-2012 23:37:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:	SLP10TMS-120612	Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	15
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

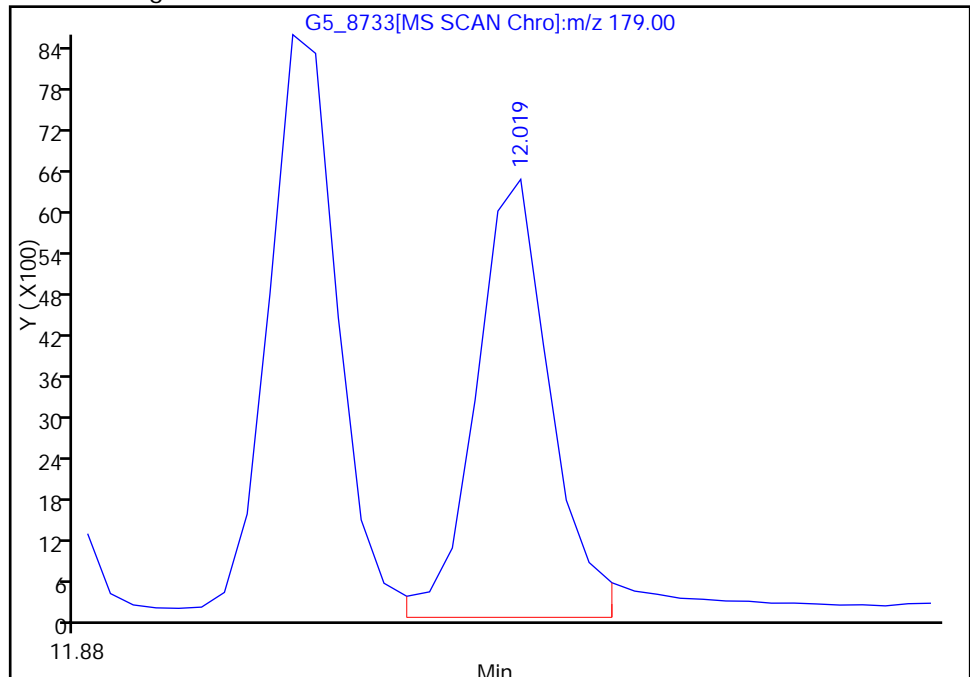
RT: 12.02
Response: 15530
Amount: 64.918305

Processing Integration Results



RT: 12.02
Response: 10366
Amount: 43.331819

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 07:10:25
Audit Action: Split an Integrated Peak
Audit Reason: Peak Tail

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Client Sample ID: SLP10T-120612 MSD Lab Sample ID: 280-36732-1 MSD

Matrix: Water Lab File ID: G5_8734.D

Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50

Extract. Method: 3520C Date Extracted: 12/11/2012 13:50

Sample wt/vol: 3739.1 (mL) Date Analyzed: 12/21/2012 00:12

Con. Extract Vol.: 1000 (uL) Dilution Factor: 1

Injection Volume: 1 (uL) Level: (low/med) Low

% Moisture: _____ GPC Cleanup: (Y/N) N

Analysis Batch No.: 153241 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
271-89-6	2,3-Benzofuran	61.9		5.8	0.73
496-11-7	2,3-Dihydroindene	58.9		5.3	0.75
90-12-0	1-Methylnaphthalene	63.6		6.0	0.95
91-57-6	2-Methylnaphthalene	63.2		6.3	1.0
83-32-9	Acenaphthene	65.0		6.1	0.53
208-96-8	Acenaphthylene	57.7		5.1	0.82
260-94-6	Acridine	17.6		7.0	7.0
120-12-7	Anthracene	60.6		4.5	0.86
56-55-3	Benzo[a]anthracene	13.8		4.6	0.98
50-32-8	Benzo[a]pyrene	3.10		2.7	1.3
192-97-2	Benzo[e]pyrene	3.82	J	4.6	1.2
205-99-2	Benzo[b]fluoranthene	5.67		5.0	1.5
95-15-8	Benzo(b) thiophene	63.0		5.6	0.80
207-08-9	Benzo[k]fluoranthene	4.80		4.4	1.3
191-24-2	Benzo[g,h,i]perylene	2.19	J	6.6	1.3
86-74-8	Carbazole	65.4		4.1	0.77
218-01-9	Chrysene	19.1		6.0	1.3
53-70-3	Dibenz(a,h)anthracene	1.82	J	6.3	1.1
132-64-9	Dibenzofuran	66.5		6.1	1.1
132-65-0	Dibenzothiophene	67.8		4.4	1.0
206-44-0	Fluoranthene	52.3		4.9	1.8
86-73-7	Fluorene	65.1		4.4	0.91
95-13-6	Indene	59.3		5.0	3.5
120-72-9	Indole	57.0		5.0	1.9
193-39-5	Indeno[1,2,3-cd]pyrene	2.05	J	5.8	1.3
91-20-3	Naphthalene	65.6		9.2	1.2
198-55-0	Perylene	ND		4.1	4.1
85-01-8	Phenanthrene	69.8		6.7	3.4
129-00-0	Pyrene	51.5		4.5	1.1
91-22-5	Quinoline	48.2		9.6	6.0
92-52-4	Biphenyl	64.9		6.0	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1
SDG No.: _____
Client Sample ID: SLP10T-120612 MSD Lab Sample ID: 280-36732-1 MSD
Matrix: Water Lab File ID: G5_8734.D
Analysis Method: 8270C SIM Date Collected: 12/06/2012 08:50
Extract. Method: 3520C Date Extracted: 12/11/2012 13:50
Sample wt/vol: 3739.1 (mL) Date Analyzed: 12/21/2012 00:12
Con. Extract Vol.: 1000 (uL) Dilution Factor: 1
Injection Volume: 1 (uL) Level: (low/med) Low
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 153241 Units: ng/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
81103-79-9	Fluorene-d10 (Surr)	78		23-84
1719-03-5	Chrysene-d12 (Surr)	23	X	28-101
1146-65-2	Naphthalene-d8 (Surr)	80		22-97

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8734.D
 Lims ID: 280-36732-P-1-A MSD Client ID: SLP10TMSD-120612
 Inject. Date: 21-Dec-2012 00:12:30 Dil. Factor: 1.0000
 Sample Type: MSD
 Sample ID: 280-0007476-016
 Misc. Info.: 280-36732-p-1-amsd =280-36732-P-1-AMSD
 Operator: vasquezk Instrument ID: SMS_G5
 Injection Vol: 1.0 ul ALS Bottle#: 15
 Lims Batch ID: 153241 Lims Sample ID: 16
 Detector: MS SCAN
 Method: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\MSG5_8270CSLPSIM.m
 Last Update: 24-Dec-2012 07:42:52 Calib Date: 20-Dec-2012 19:28:30
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8726.D
 Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water
 Integrator: RTE ID Type: Deconvolution ID
 Column Type: Column Dia:
 Process Host: DENPC365

First Level Reviewer: vasquezk

Date: 24-Dec-2012 07:11:07

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	9.212	9.212	0.0	1	164846	600.0	
* 2 Phenanthrene-d10	188	11.827	11.827	0.0	1	261546	600.0	
* 3 Perylene-d12	264	18.434	18.434	0.0	1	263272	600.0	
\$ 4 Naphthalene-d8 (Surr)	136	6.081	6.081	0.0	1	114951	240.9	
\$ 5 Fluorene-d10 (Surr)	176	10.144	10.144	0.0	0	56309	234.0	
\$ 6 Chrysene-d12 (Surr)	240	16.239	16.239	0.0	1	24138	68.9	
8 2,3-Benzofuran	118	4.203	4.203	0.0	1	53804	231.3	
9 2,3-Dihydroindene	117	4.577	4.577	0.0	1	66320	220.1	
10 Indene	116	4.682	4.682	0.0	1	65805	221.7	
11 Naphthalene	128	6.108	6.114	-0.006	1	120492	245.2	
12 Benzo(b)thiophene	134	6.190	6.190	0.0	1	101590	235.5	
13 Quinoline	129	6.628	6.628	0.0	5	47317	180.3	
14 Indole	117	7.153	7.157	-0.004	1	57924	213.2	
15 2-Methylnaphthalene	142	7.268	7.268	0.0	1	75819	236.2	
16 1-Methylnaphthalene	142	7.458	7.458	0.0	1	69831	237.9	
17 1,1'-Biphenyl	154	8.147	8.147	0.0	1	91636	242.7	
18 Acenaphthylene	152	8.948	8.948	0.0	2	82321	215.7	
19 Acenaphthene	154	9.264	9.273	-0.009	4	64672	243.2	
20 Dibenzofuran	168	9.581	9.590	-0.009	1	95956	248.8	
21 Fluorene	166	10.198	10.198	0.0	1	73837	243.4	
22 Dibenzothiophene	184	11.649	11.649	0.0	1	92170	253.6	
23 Phenanthrene	178	11.862	11.862	0.0	1	113292	261.1	
24 Anthracene	178	11.947	11.947	0.0	1	81390	226.7	
25 Acridine	179	12.018	12.019	0.0	1	15602	65.9	M
26 Carbazole	167	12.246	12.246	0.0	1	83634	244.6	
27 Fluoranthene	202	13.870	13.870	0.0	1	75058	195.7	
28 Pyrene	202	14.248	14.248	0.0	6	82030	192.5	
29 Benzo[a]anthracene	228	16.223	16.223	0.0	1	14344	51.7	
30 Chrysene	228	16.282	16.282	0.0	1	28655	71.5	
31 6-Methylchrysene	242	17.001	17.001	0.0	1	6958	0	

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ml	Flags
32 7,12-Dimethylbenz(a)anthracene	256	17.869	17.869	0.0	1	14301	119.0	
33 Benzo[b]fluoranthene	252	17.882	17.882	0.0	1	7714	21.2	
34 Benzo[k]fluoranthene	252	17.919	17.920	-0.001	1	7845	17.9	
35 Benzo[e]pyrene	252	18.277	18.277	0.0	1	5163	14.3	
36 Benzo[a]pyrene	252	18.346	18.352	-0.006	1	3837	11.6	
37 Perylene	252	18.465	18.465	0.0	1	1508	3.71	
38 3-Methylcholanthrene	268	18.803	18.810	-0.007	1	512	4.00	
39 Dibenzo[a,h]acridine	279	19.598	19.604	-0.006	1	1010	0	
40 Dibenzo[a,j]acridine	279	19.673	19.679	-0.006	1	893	0	
41 Indeno[1,2,3-cd]pyrene	276	19.973	19.979	-0.006	1	2431	7.68	
42 Dibenzo(a,h)anthracene	278	19.998	19.992	0.006	1	1636	6.80	
44 Benzo[g,h,i]perylene	276	20.435	20.436	-0.001	1	2750	8.21	
45 Dibenzo(def,p)chrysene	302	22.818	22.830	-0.012	1	607	0	
S 48 Benzofluoranthene	1				0		39.1	

QC Flag Legend

Review Flags

M - Manually Integrated

TestAmerica Denver

Data File: \\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8734.D

Injection Date: 21-Dec-2012 00:12:30

Limit Group: MSSV - 8270_SIM_LL CSLP 4 liter water

Client ID: SLP10TMSD-120612

Instrument ID: SMS_G5

Lims Batch ID: 153241

Lims Sample ID: 16

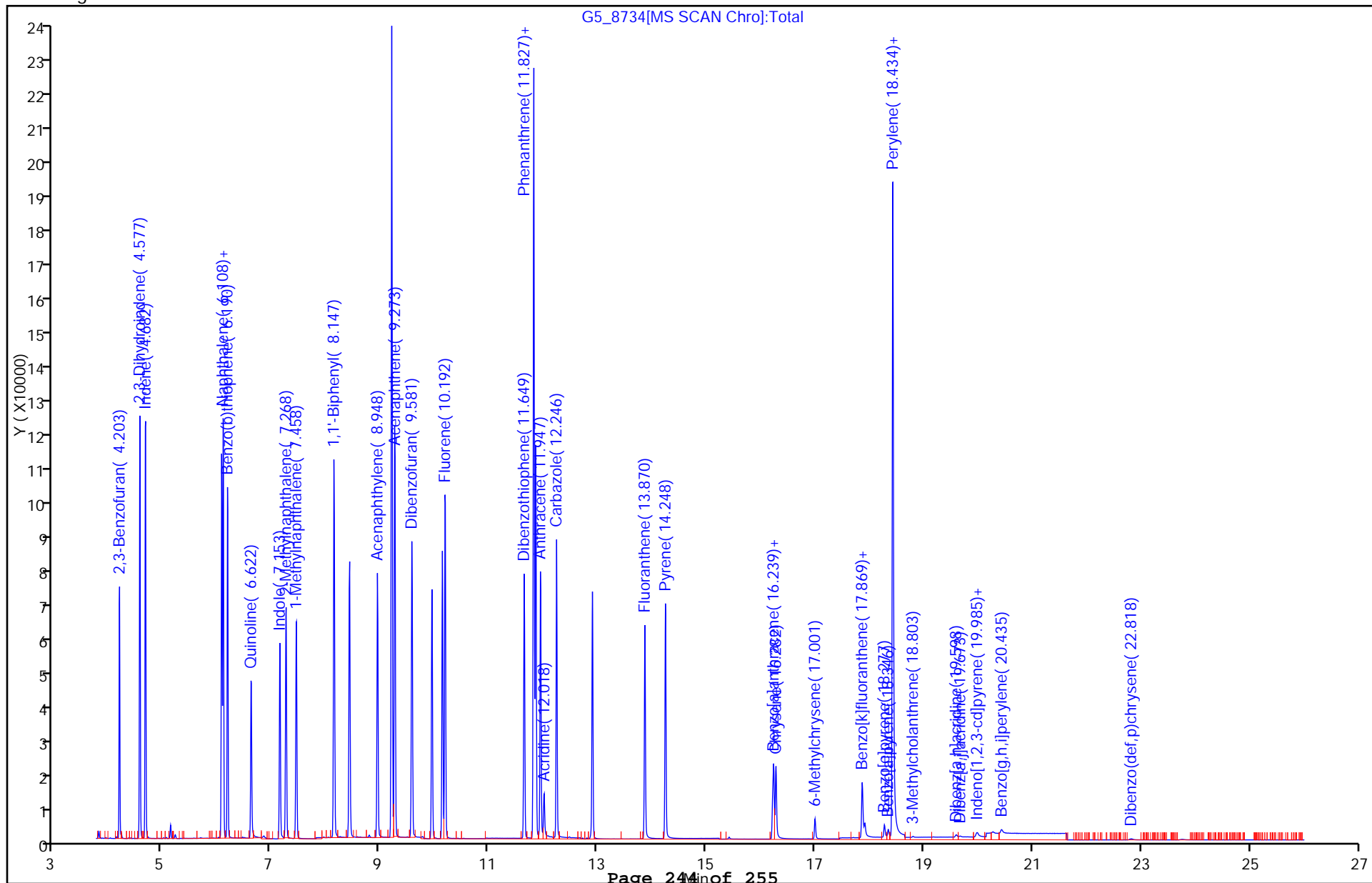
Operator ID: vasquezk

Injection Vol: 1.0 ul

Column Type:

Column Dia:

Y Scaling:



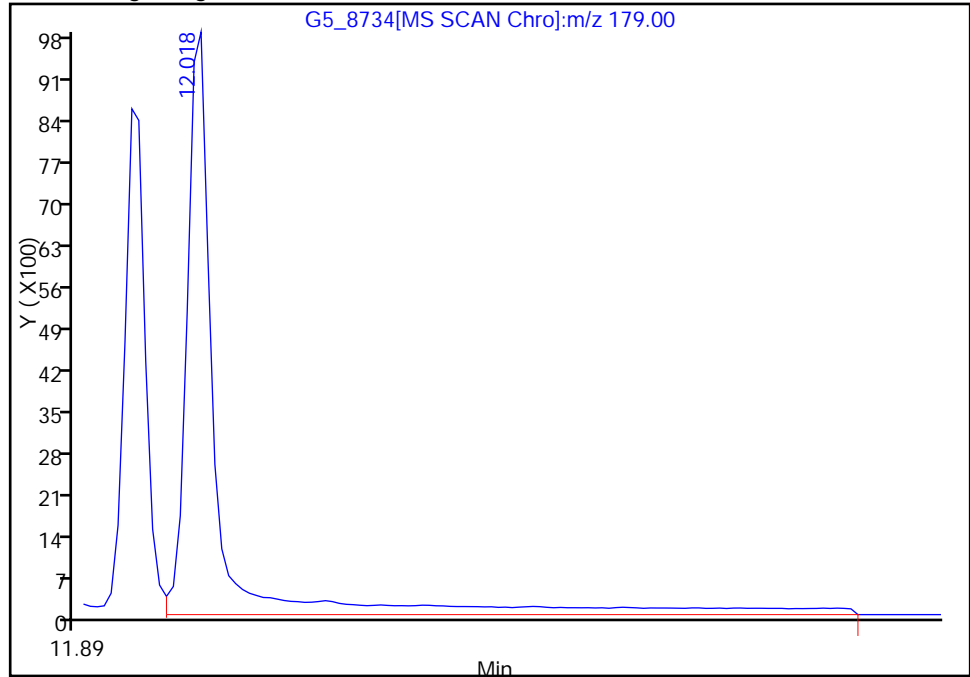
TestAmerica Denver

Data File:	\\Denchrom\ChromData\SMS_G5\20121220-7476.b\G5_8734.D		
Injection Date:	21-Dec-2012 00:12:30	Limit Group:	MSSV - 8270_SIM_LL CSLP 4 liter water
Client ID:	SLP10TMSD-120612	Instrument ID:	SMS_G5
Lims Batch ID:	153241	Lims Sample ID:	16
Operator ID:	vasquezk	Injection Vol:	1.0 ul
Column Type:		Column Dia:	

25 Acridine, Signal: 1, m/z: 179.0 Type: quant, RT: 12.02

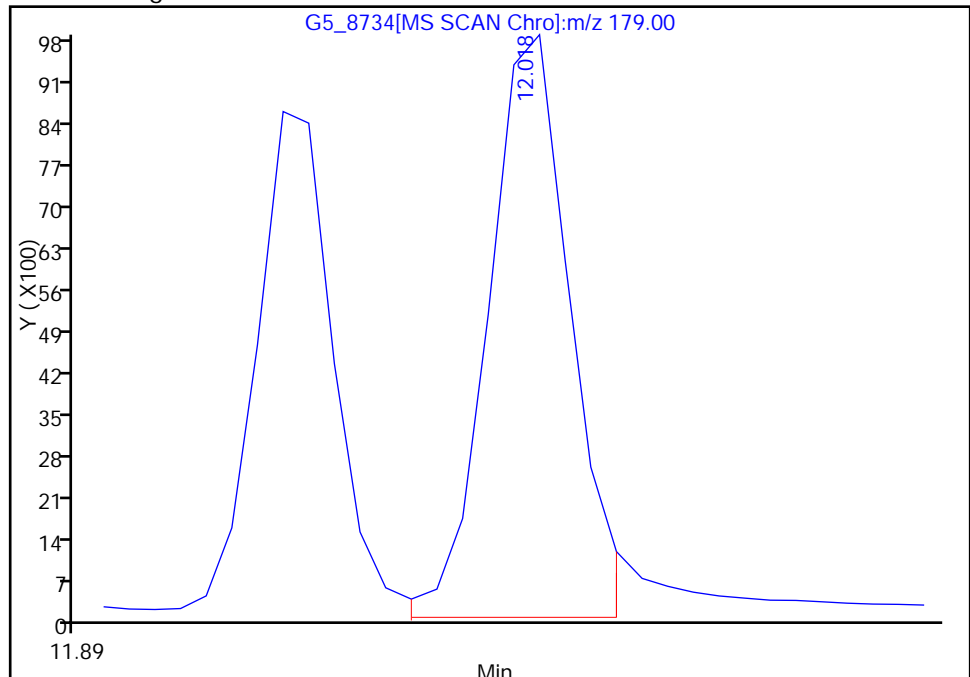
RT: 12.02
Response: 21702
Amount: 91.689612

Processing Integration Results



RT: 12.02
Response: 15602
Amount: 65.917488

Manual Integration Results



Reviewer: vasquezk, 24-Dec-2012 07:11:07

Audit Action: Split an Integrated Peak

Audit Reason: Peak Tail

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Instrument ID: SMS_G5 Start Date: 12/20/2012 15:49Analysis Batch Number: 153241 End Date: 12/21/2012 03:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD0010 280-153241/2 IC		12/20/2012 15:49	1	G5_8720.D	Vf-5MS (30.25) 0.25 (mm)
STD0020 280-153241/3 IC		12/20/2012 16:30	1	G5_8721.D	Vf-5MS (30.25) 0.25 (mm)
STD0150 280-153241/4 IC		12/20/2012 17:06	1	G5_8722.D	Vf-5MS (30.25) 0.25 (mm)
ICIS 280-153241/5		12/20/2012 17:41	1	G5_8723.D	Vf-5MS (30.25) 0.25 (mm)
STD0600 280-153241/6 IC		12/20/2012 18:17	1	G5_8724.D	Vf-5MS (30.25) 0.25 (mm)
STD0800 280-153241/7 IC		12/20/2012 18:52	1	G5_8725.D	Vf-5MS (30.25) 0.25 (mm)
STD1200 280-153241/8 IC		12/20/2012 19:28	1	G5_8726.D	Vf-5MS (30.25) 0.25 (mm)
ICV 280-153241/9		12/20/2012 20:03	1	G5_8727.D	Vf-5MS (30.25) 0.25 (mm)
MB 280-151568/1-A		12/20/2012 20:39	1	G5_8728.D	Vf-5MS (30.25) 0.25 (mm)
LCS 280-151568/2-A		12/20/2012 21:14	1	G5_8729.D	Vf-5MS (30.25) 0.25 (mm)
280-36792-A-1-A MDLV		12/20/2012 21:50	1		Vf-5MS (30.25) 0.25 (mm)
280-36792-A-2-A MDLV		12/20/2012 22:26	1		Vf-5MS (30.25) 0.25 (mm)
280-36732-1	SLP10T-120612	12/20/2012 23:01	1	G5_8732.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-1 MS	SLP10T-120612 MS	12/20/2012 23:37	1	G5_8733.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-1 MSD	SLP10T-120612 MSD	12/21/2012 00:12	1	G5_8734.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-2	SLP10TD-120612	12/21/2012 00:48	1	G5_8735.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-3	SLP10TFB-120612	12/21/2012 01:24	1	G5_8736.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-4	SLP6-120612	12/21/2012 01:59	1	G5_8737.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-5	W119-120612	12/21/2012 02:35	1	G5_8738.D	Vf-5MS (30.25) 0.25 (mm)
280-36732-6	W48-120612	12/21/2012 03:11	1	G5_8739.D	Vf-5MS (30.25) 0.25 (mm)

GC/MS SVOA Initial Calibration Review Checklist

Instrument ID and Date: G5 122012
 Calibration Event 12198 1L Batch 153226
12199 4L 153241
 Check Method Used: Analysis ☐ 625 ☐ 8270 ☒ Other SV CSLP SIM

Review Items	Level 1		Level 2	Comments
	Yes	No		
Initial Calibration				
1. DFTPP meets criteria?			<u>N/A</u>	
2. ICAL date and instrument ID verified?	<u>—</u>		<u>—</u>	
3. Does the Form VI match the data in the Target source method?	<u>—</u>		<u>—</u>	
4. Sufficient number of calibration points used?	<u>—</u>		<u>—</u>	
5. Reasons for removal of points documented?	<u>—</u>		<u>—</u>	Some points < RL removed
6. %RSD or correlation coefficient within method limits?	<u>—</u>		<u>—</u>	
7. If RRF used for ICAL, were all compounds within 15% RSD?			<u>N/A</u>	List all exceptions below (cpd & RSD)
8. Response factors meet criteria?			<u>N/A</u>	
9. Isomeric pairs checked for correct peak assignment?	<u>—</u>		<u>—</u>	
10. Data checked for detector saturation?	<u>—</u>		<u>—</u>	
11. Standards traceability properly documented?	<u>—</u>		<u>—</u>	
12. Manual integrations documented and checked?	<u>—</u>		<u>—</u>	
13. 2 nd source ICV recovery 75-125% ($\pm 25\%$ drift) for DoD projects, <u>65-135% ($\pm 35\%$ or $\pm 55\%$ of expected for poor performers)</u> for non-DoD? Exceptions noted in comment section.	<u>—</u>		<u>—</u>	DoD V4 $\pm 20\%R$

2-Methylnaphthalene calibrated to 10ug/mL

1st Level Reviewer: Key Date: 1224122nd Level Reviewer: QAL Date: 12124/12

GC/MS TALS Initial Calibration Review Checklist

TestAmerica

Denver

Instrument ID and Date: G5 122012 ICAL Event 12198 ICAL Batch/ICV lines 1532269
 ICAL Event 12199 ICAL Batch/ICV lines 1532419
 2nd day Batch /ICV lines _____

Check Method Used: Analysis ☐ 625 ☐ 8270 ☒ Other SV CS2P SIM

☐ 524.2 ☐ 624 ☐ 8260B ☐ Other VOA

VOA Preparation ☐ 5mL ☐ 20mL ☐ 5035 Low ☐ 5035 High ☐ 5030 Low ☐ 5030 High

Review Items		Level 1		Level 2	Comments
Yes	No	Yes	No		
TALS Initial Calibration					
1. BFB / ICAL standards entered with correct volumes	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
2. Label number of standards used recorded	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
3. ICV(s) standards entered	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
4. Internal Standard/ Surrogate entered	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
5. Sample Volumes entered	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
6. ICAL locked and matches Target Initial calibration report	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
7. Calibration batch recorded	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
8. ICV line reference recorded	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
9. Active ICV (s) Main & Supp linked to ICIS				<input checked="" type="checkbox"/>	
10. Raw data attached (paper clip report)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	

1st Level Reviewer: ky Date: 122412

2nd Level Reviewer: QJ Date: 12124/12

Revision 2

3/16/2011

G:\QA\Edit\Foms\Data Review\GCMS TALS ICAL

Ref 12/12

C:\MSDCHEM\1\DATA\122012.B\

Vial	Mult	Sample Name	Batch	Injected
100	35_8718.D	1	ion window check	20 Dec 12 14:30
98	35_8719.D	1	rinse	20 Dec 12 15:08
1	35_8720.D	1	STD0010	20 Dec 12 15:49
2	35_8721.D	1	STD0020	20 Dec 12 16:30
3	35_8722.D	1	STD0150	20 Dec 12 17:06
4	35_8723.D	1	ICIS	20 Dec 12 17:41
5	35_8724.D	1	STD0600	20 Dec 12 18:17
6	35_8725.D	1	STD0800	20 Dec 12 18:52
7	35_8726.D	1	STD1200	20 Dec 12 19:28
8	35_8727.D	1	ICV	20 Dec 12 20:03
9	35_8728.D	1	280-0007476-010	20 Dec 12 20:39
10	35_8729.D	1	280-0007476-011	20 Dec 12 21:14
11	35_8730.D	1	280-0007476-012	20 Dec 12 21:50
12	35_8731.D	1	280-0007476-013	20 Dec 12 22:26
13	35_8732.D	1	280-0007476-014	20 Dec 12 23:01
14	35_8733.D	1	280-0007476-015	20 Dec 12 23:37
15	35_8734.D	1	280-0007476-016	21 Dec 12 12:12
16	35_8735.D	1	280-0007476-017	21 Dec 12 12:48
17	35_8736.D	1	280-0007476-018	21 Dec 12 01:24
18	35_8737.D	1	280-0007476-019	21 Dec 12 01:59
19	35_8738.D	1	280-0007476-020	21 Dec 12 02:35
20	35_8739.D	1	280-0007476-021	21 Dec 12 03:11

Diluent Solvent Lot # 66666

Circle: SOP: DV-MS-0011 (8270C/625) or DV-MS-0002 (PAH SIM) or DV-MS-0005 (PAH for CSLP)

Daily Maintenance Performed: front end, and ~12" Ref 12/12

: Instrument #1

: Negative

: 2

BasePeak should be 69 or 219

Position of mass 69

Position of mass 219

Position of mass 502

Position of isotope mass 70

Position of isotope mass 220

Position of isotope mass 503

Ratio of mass 70 to mass 69(0.5 - 1.6%)

Ratio of mass 220 to mass 219(3.2 - 5.4%)

Ratio of mass 503 to mass 502(7.9 - 12.3%)

Ratio of 219 to 69 should be > 40% and is

Ratio of 502 to 69 should be > 2.4% and is

Mass 69 Precursor (<= 3%)

Mass 219 Precursor (<= 6%)

Mass 502 Precursor (<= 12%)

Testing for a leak in the system

Ratio of 18 to 69 (<20%)

Ratio of 28 to 69 (<10%)

Electron Multiplier Voltage

OK 1247

Tune portion of System Verification passed.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Batch Number: 151568 Batch Start Date: 12/11/12 13:50 Batch Analyst: Wiggins, Joshua JBatch Method: 3520C Batch End Date: 12/12/12 20:43

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	CSLP_SIM_LCS 00004	CSLP_SIM_SURR 00014
MB 280-151568/1		3520C, 8270C SIM		7 SU	4000 mL	1000 uL	14 SU		1 mL
LCS 280-151568/2		3520C, 8270C SIM		7 SU	4000 mL	1000 uL	14 SU	1 mL	1 mL
280-36732-J-1	SLP10T-120612	3520C, 8270C SIM	T	7 SU	3703.6 mL	1000 uL	14 SU		1 mL
280-36732-M-1 MS	SLP10T-120612	3520C, 8270C SIM	T	7 SU	3741.8 mL	1000 uL	14 SU	1 mL	1 mL
280-36732-P-1 MSD	SLP10T-120612	3520C, 8270C SIM	T	7 SU	3739.1 mL	1000 uL	14 SU	1 mL	1 mL
280-36732-B-2	SLP10TD-120612	3520C, 8270C SIM	T	7 SU	3875.1 mL	1000 uL	14 SU		1 mL
280-36732-E-3	SLP10TFB-120612	3520C, 8270C SIM	T	5 SU	3766.2 mL	1000 uL	14 SU		1 mL
280-36732-E-4	SLP6-120612	3520C, 8270C SIM	T	7 SU	3749.9 mL	1000 uL	14 SU		1 mL
280-36732-B-5	W119-120612	3520C, 8270C SIM	T	7 SU	3920.3 mL	1000 uL	14 SU		1 mL
280-36732-D-6	W48-120612	3520C, 8270C SIM	T	7 SU	3938.7 mL	1000 uL	14 SU		1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270C SIM

Page 1 of 2

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-36732-1

SDG No.: _____

Batch Number: 151568 Batch Start Date: 12/11/12 13:50 Batch Analyst: Wiggins, Joshua JBatch Method: 3520C Batch End Date: 12/12/12 20:43

Batch Notes	
Base used for pH adjust Lot #	10N_NaOH_00021
Batch Comment	DV-MS-0005 App. II, DV-OP-0007, Balance: 24350888, H2O: Pre-extracted Elga, NaCl: 0000021647
Concentration Start Time	Concentrated on bath A @ 84 (obs 85)
Person's name who did the concentration	Hornbaker, J.
Time the first extraction ended 24hr	12/12/12 1410
Time the first extraction started 24 hr	12/11/12 1400
Na2SO4 Lot Number	0000008131_00005
Prep Solvent Lot #	MeCl2_Cycl_00073
Prep Solvent Name	MeCl2
Prep Solvent Volume Used	150 mL
Person's name who did the prep	Josh Wiggins, Pipette: I, J
Person's name who witnessed reagent drop	Frey, A.
Sufficient volume for MS/MSD?	Yes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Chain of Custody Record

TAL-4124-280 (0509)

Sampler ID 2.8
Temperature on Receipt? 32 34
Drinking Water? Yes ☐ No ☐ 12/10/12 LEADER IN ENVIRONMENTAL TESTING

TestAmerica

Client	Summit EnviroSolutions	Project Manager	Bill Gregg	Date	12/06/12	Chain of Custody Number	156480
Address	1217 Bandana Boulevard North	Telephone Number (Area Code)/Fax Number	651-262-4236	Lab Number		Page	1 of 1
City	St. Paul	State	MN	Zip Code	55108		

Project Name and Location (State)	Reilly Site (MN)	Carrier/Waybill Number		Analysis (Attach list if more space is needed)		Special Instructions/Conditions of Receipt	
Contract/Purchase Order/Quote No.	0987-0009						

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives				
			Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	PAH-PTS
SLP10T-120612	12/06/12	8:50										
SLP10TD-120612		8:50										
SLP10TMS-120612		8:50										
SLP10TMSD-120612		8:50										
SLP10TFB-120612		8:50										
SLP6-120612		12:00										
W119-120612		8:10										
W48-120612		11:00										

Possible Hazard Identification	<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	Sample Disposal	<input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required	<input type="checkbox"/> 24 Hours	<input type="checkbox"/> 48 Hours	<input type="checkbox"/> 7 Days	<input type="checkbox"/> 14 Days	<input type="checkbox"/> 21 Days	Other					
1. Relinquished By	Ryan Anderson	Date	12/06/12	Time	13:00	1. Received By		Date	12/17/12	Time	9:30
2. Relinquished By		Date		Time		2. Received By		Date		Time	
3. Relinquished By		Date		Time		3. Received By		Date		Time	
Comments											

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Login Number: 36732

List Source: TestAmerica Denver

List Number: 1

Creator: Eichelberger, Elizabeth M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION
FOR
GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-36732-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 27, 2013

Reilly\280-36732-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for five aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-35162-1 in a single data package. The following samples were reported:

SLP10T-120612	SLP10TD-126012	SLP10TFB-102612
SLP6-120612	W119-120612	W48-120612

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL).
- Results for 2-Methylnaphthalene and Naphthalene in W48-120612, W119-120612 and SLP10T-120612 and results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3,cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects. Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J).
- Results for 2, 3-Dihydroindene in SLP10T-120612 were qualified as not detected (U) at the RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

- U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- MI = This flag applies when an compound has matrix interferences.

- N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a “tentative identification”.
- NJ= The analysis indicates the presence of an compound that has been “tentatively identified” and the associated numerical value represent its approximate concentration.
- UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of December, 6, 2012. The samples were received by the laboratory on December 7, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (2.8° C to 3.4° C; criteria 4.0° C \pm 2.0° C). All samples were extracted on December 11, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on December 20 and 21, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided. See Section XII Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on December 20, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. Benzo[a]anthracene (3.43 ng/L), Benzo[b]fluoranthene (5.62 ng/L),

Benzo[k]fluoranthene (4.92 ng/L), Benzo[g,h,i]perylene (3.90 ng/L), Chrysene (6.16 ng/L), Dibenz[a,h]anthracene (4.05 ng/L), Fluoranthene (3.76 ng/L), Indeno[1,2,3,c,d]pyrene and Pyrene (2.32 ng/L) were detected in the method blank. Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.

2-Methylnaphthalene (1.1 ng/L), Acenaphthene (0.77 ng/L) and Naphthalene (3.0 ng/L) were detected in the field blank. Results for 2-Methylnaphthalene and Naphthalene in W48-120612 and W119-120612 and results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL or reported concentration, whichever is greater due to sample concentrations detected within five-times the concentration found in the field blank. The remaining compounds in the field samples were not detected or sufficiently high that the amount detected in the field blank would have no impact on the reported results.

V. Surrogate Compound Recovery

Recoveries of all surrogate compounds were correctly calculated, accurately reported. Percent recoveries (%R) were within acceptance limits with the exception of Chrysene-d12 in SLP6-120612 (13%R), SLP10T-120612 (16%R), SLP10TD-120612 (15%R) and W119-120612 (25%R). Results for Benzo [a] anthracene, Chrysene, Benzo [b] fluoranthene, Benzo [k] fluoranthene, Benzo [e] pyrene, Benzo [a] pyrene, Perylene, Indeno [1,2,3-cd] pyrene, Dibenz (a,h) anthracene, and Benzo [g,h,i] perylene in SLP6-120612, SLP10TD-120612, SLP10T-120612 and W119-120612 were not qualified on this basis because all analytes were subsequently qualified based on unacceptable MS/MSD percent recoveries (%R).

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample SLP10T-1206012. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits	Action (Detects/Non-detects)
				%R (RPD)	
Acridine	14	22	41	30-150 (25)	L/UJ
Benzo[a]anthracene	13	17	31	30-150 (25)	L/UJ
Benzo[a]pyrene	3	4	22	30-150 (25)	L/R
Benzo[e]pyrene	4	5	12	30-150 (25)	L/R
Benzo[b]fluoranthene	6	7	20	30-150 (25)	L/R
Benzo[k]fluoranthene	5	6	12	30-150 (25)	L/R
Benzo[g,h,i]perylene	4	3	26	30-150 (25)	L/R
Chrysene	17	24	34	20-136 (25)	L/UJ
Dibenz[a,h]anthracene	3	2	23	30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	3	3	21	30-150 (25)	L/R
Perylene	0	0	na	30-150 (25)	R

*based on amount recovered.

Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3-cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recoveries (<10%R). Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J) due to low MS/MSD recovery.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable.

VII. Field Duplicate

Sample SLP10TD-120612 was collected as a field duplicate of sample SLP10T-120612. All RPDs were within quality control limits ($\leq 25\%$ if both samples are $>5X$ RL) for both field duplicate pairs. 2,3-Dihydroindene was detected in SLP10T-120612 but was not reported in the paired sample. Results for 2, 3-Dihydroindene in SLP10TD-120612 were qualified as not detected (U) at the analyte-specific RL on this basis.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied “J” qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goal with the exception of Perylene in SLP10T-120612 and SLP6-120612 with the project RL goal at 4.0 ng/L and the MDL at 4.1 ng/L in both samples.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- Response factors (RF) for the 10 ng/L and 20 ng/L standards in the IC could not be reproduced. This did not affect the final sample results.
- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument.
- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have “System Verification for Instrument #1” in the footer with no link to an instrument. The laboratory was contacted and stated, “The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout

handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages”.

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.
- Results for 2-Methylnaphthalene and Naphthalene in W48-120612 and W119-120612 results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL due to sample concentrations detected within five-times the concentration found in the field blank.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3,cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recoveries (<10%R). Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J) due to low MS/MSD recovery.
- Results for 2, 3-Dihydroindene in SLP10T-120612 were qualified as not detected (U) at the RL due to imprecision in field duplicate samples.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semi-volatiles data.

APPENDIX A

PAHs in Water

Data Summary Forms

[illegible]

APPENDIX B

PAHs in Water

Laboratory Form 1s

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10T-120612

Lab Sample ID: 280-36732-1

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8732.D
Dilution:	1.0			Initial Weight/Volume:	3703.6 mL
Analysis Date:	12/20/2012 2301			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	0.76 U	J	0.76	5.4
1-Methylnaphthalene	ND		0.96	6.0
2-Methylnaphthalene	ND		1.1	6.4
Acenaphthene	1.2	J	0.54	6.2
Acenaphthylene	ND		0.83	5.2
Acridine	ND UJ		7.0	7.0
Anthracene	ND		0.86	4.5
Benzo[a]anthracene	ND UJ		0.99	4.6
Benzo[a]pyrene	ND R		1.3	2.7
Benzo[e]pyrene	ND R		1.2	4.6
Benzo[b]fluoranthene	ND R		1.5	5.1
Benzo(b)thiophene	ND		0.81	5.6
Benzo[k]fluoranthene	ND R		1.3	4.4
Benzo[g,h,i]perylene	ND R		1.3	6.7
Carbazole	ND		0.78	4.1
Chrysene	ND UJ		1.3	6.0
Dibenz(a,h)anthracene	ND R		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	5.0
Fluorene	ND		0.92	4.4
Indene	ND		3.5	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	ND R		1.4	5.8
Naphthalene	2.5 U	J	1.2	9.3
Perylene	ND R		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	ND		1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	15	X	28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

ju Rassi
2/27/13

Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10TD-120612

Lab Sample ID: 280-36732-2FD

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8735.D
Dilution:	1.0			Initial Weight/Volume:	3875.1 mL
Analysis Date:	12/21/2012 0048			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.6
2,3-Dihydroindene	ND		0.72	5.2
1-Methylnaphthalene	ND		0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthene	ND		0.52	5.9
Acenaphthylene	ND		0.79	5.0
Acridine	ND <i>UJ</i>		6.7	6.7
Anthracene	ND		0.83	4.3
Benzo[a]anthracene	ND <i>UJ</i>		0.95	4.4
Benzo[a]pyrene	ND <i>R</i>		1.3	2.6
Benzo[e]pyrene	ND <i>R</i>		1.2	4.4
Benzo[b]fluoranthene	ND <i>R</i>		1.4	4.9
Benzo(b)thiophene	ND		0.77	5.4
Benzo[k]fluoranthene	ND <i>UJ</i>		1.3	4.2
Benzo[g,h,i]perylene	ND <i>UJ</i>		1.2	6.4
Carbazole	ND		0.74	3.9
Chrysene	ND <i>UJ</i>		1.3	5.8
Dibenz(a,h)anthracene	ND <i>R</i>		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.3	5.6
Naphthalene	<i>1.3-4.1</i>	<i>+</i>	1.2	8.9
Perylene	ND <i>R</i>		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	ND		1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	16	X	28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

gu Rossi
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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP10TFB-120612

Lab Sample ID: 280-36732-3FB

Date Sampled: 12/06/2012 0850

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8736.D
Dilution:	1.0			Initial Weight/Volume:	3766.2 mL
Analysis Date:	12/21/2012 0124			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	ND		0.74	5.3
1-Methylnaphthalene	ND		0.95	5.9
2-Methylnaphthalene	1.1	J	1.0	6.3
Acenaphthene	0.77	J	0.53	6.1
Acenaphthylene	ND		0.82	5.1
Acridine	ND <i>WJ</i>		6.9	6.9
Anthracene	ND		0.85	4.5
Benzo[a]anthracene	ND <i>WJ</i>		0.98	4.6
Benzo[a]pyrene	ND <i>R</i>		1.3	2.7
Benzo[e]pyrene	ND <i>R</i>		1.2	4.6
Benzo[b]fluoranthene	ND <i>R</i>		1.5	5.0
Benzo(b)thiophene	ND		0.80	5.5
Benzo[k]fluoranthene	ND <i>R</i>		1.3	4.4
Benzo[g,h,i]perylene	ND <i>R</i>		1.2	6.6
Carbazole	ND		0.76	4.0
Chrysene	ND <i>WJ</i>		1.3	5.9
Dibenz(a,h)anthracene	ND <i>R</i>		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	ND		1.0	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.90	4.4
Indene	ND		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.3	5.7
Naphthalene	3.0 <i>WJ</i>	<i>T</i>	1.2	9.1
Perylene	ND <i>R</i>		4.0	4.0
Phenanthrene	ND		3.4	6.7
Pyrene	ND		1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	74		23 - 84
Chrysene-d12 (Surr)	85		28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: SLP6-120612

Lab Sample ID: 280-36732-4

Date Sampled: 12/06/2012 1200

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8737.D
Dilution:	1.0			Initial Weight/Volume:	3749.9 mL
Analysis Date:	12/21/2012 0159			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	41		0.75	5.3
1-Methylnaphthalene	1.3	J	0.95	6.0
2-Methylnaphthalene	ND		1.0	6.3
Acenaphthene	56		0.53	6.1
Acenaphthylene	6.1		0.82	5.1
Acridine	ND <i>UJ</i>		6.9	6.9
Anthracene	1.7	J	0.85	4.5
Benzo[a]anthracene	ND <i>UJ</i>		0.98	4.6
Benzo[a]pyrene	ND <i>R</i>		1.3	2.7
Benzo[e]pyrene	ND <i>R</i>		1.2	4.6
Benzo[b]fluoranthene	ND <i>R</i>		1.5	5.0
Benzo(b)thiophene	7.5		0.80	5.5
Benzo[k]fluoranthene	ND <i>UJ</i>		1.3	4.4
Benzo[g,h,i]perylene	ND <i>UJ</i>		1.2	6.6
Carbazole	1.7	J	0.77	4.1
Chrysene	ND <i>UJ</i>		1.3	6.0
Dibenz(a,h)anthracene	ND <i>R</i>		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	1.4	J	1.0	4.4
Fluoranthene	1.9 <i>U</i>	JB	1.8	4.9
Fluorene	0.94	J	0.91	4.4
Indene	5.3		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	ND <i>R</i>		1.3	5.8
Naphthalene	4.4 <i>U</i>	+	1.2	9.2
Perylene	ND <i>R</i>		4.1	4.1
Phenanthrene	ND		3.4	6.7
Pyrene	3.0 <i>U</i>	JB	1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	6.0
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	58		23 - 84	
Chrysene-d12 (Surr)	13	X	28 - 101	
Naphthalene-d8 (Surr)	60		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: W119-120612

Lab Sample ID: 280-36732-5

Date Sampled: 12/06/2012 0810

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8738.D
Dilution:	1.0			Initial Weight/Volume:	3920.3 mL
Analysis Date:	12/21/2012 0235			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	5.0	J	0.71	5.1
1-Methylnaphthalene	1.7	J	0.91	5.7
2-Methylnaphthalene	4.4 U	J	1.0	6.0
Acenaphthene	39		0.51	5.8
Acenaphthylene	2.2	J	0.79	4.9
Acridine	7.6 L		6.6	6.6
Anthracene	3.4	J	0.82	4.3
Benzo[a]anthracene	ND UJ		0.94	4.4
Benzo[a]pyrene	ND R		1.3	2.6
Benzo[e]pyrene	ND R		1.2	4.4
Benzo[b]fluoranthene	ND R		1.4	4.8
Benzo(b)thiophene	7.2		0.77	5.3
Benzo[k]fluoranthene	ND UJ		1.3	4.2
Benzo[g,h,i]perylene	ND UJ		1.2	6.3
Carbazole	1.3	J	0.73	3.9
Chrysene	ND UJ		1.3	5.7
Dibenz(a,h)anthracene	ND R		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	18		3.3	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	ND R		1.3	5.5
Naphthalene	4.4 U	J	1.2	8.8
Perylene	ND R		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	12	B	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	80		23 - 84	
Chrysene-d12 (Surr)	25	X	28 - 101	
Naphthalene-d8 (Surr)	78		22 - 97	

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Analytical Data

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: W48-120612

Lab Sample ID: 280-36732-6

Date Sampled: 12/06/2012 1100

Client Matrix: Water

Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8739.D
Dilution:	1.0			Initial Weight/Volume:	3938.7 mL
Analysis Date:	12/21/2012 0311			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.89	J	0.69	5.5
2,3-Dihydroindene	5.1		0.71	5.1
1-Methylnaphthalene	3.2	J	0.90	5.7
2-Methylnaphthalene	1.8 U	J	1.0	6.0
Acenaphthene	96		0.51	5.8
Acenaphthylene	4.1	J	0.78	4.9
Acridine	13 L		6.6	6.6
Anthracene	5.4		0.81	4.3
Benzo[a]anthracene	ND UJ		0.93	4.4
Benzo[a]pyrene	ND R		1.3	2.5
Benzo[e]pyrene	ND R		1.2	4.4
Benzo[b]fluoranthene	ND R		1.4	4.8
Benzo(b)thiophene	12		0.76	5.3
Benzo[k]fluoranthene	ND R		1.3	4.2
Benzo[g,h,i]perylene	ND R		1.2	6.3
Carbazole	1.7	J	0.73	3.9
Chrysene	ND UJ		1.3	5.7
Dibenz(a,h)anthracene	ND R		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.86	4.2
Indene	47		3.3	4.8
Indole	2.1	J	1.8	4.8
Indeno[1,2,3-cd]pyrene	ND R		1.3	5.5
Naphthalene	5.2 U	J	1.2	8.7
Perylene	ND R		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	3.6 U	J	1.0	4.3
Quinoline	ND		5.7	9.1
Biphenyl	ND		1.1	5.7
Surrogate	%Rec	Qualifier	Acceptance Limits	
Fluorene-d10 (Surr)	83		23 - 84	
Chrysene-d12 (Surr)	43		28 - 101	
Naphthalene-d8 (Surr)	75		22 - 97	

Jim Rossi
2/27/13